

DOCUMENT RESUME

ED 107 068

95

EC 072 851

AUTHOR .. Kramer, Kay F., Ed.; Rosonke, Richard, Ed.
TITLE State of the Art: Diagnosis and Treatment.
SPONS AGENCY Bureau of Education for the Handicapped (DHEW/OE),
Washington, D.C.
PUB DATE Sep 74
CONTRACT OEC-0-9-252901-4539 (608)
NOTE 326p.; Papers presented at the National Regional
Resource Center Conference (Reston, Virginia,
September 1974); Copyrighted illustrations have been
removed

EDRS PRICE MF-\$0.76 HC-\$17.13 PLUS POSTAGE
DESCRIPTORS Cognitive Processes; Conference Reports; Educational
Diagnosis; *Educational Programs; *Emotionally
Disturbed; Exceptional Child Education; *Learning
Disabilities; *Mentally Handicapped; *Multiply
Handicapped; National Programs; Systems Approach

ABSTRACT

Eight papers on the diagnosis and treatment of handicapped children comprise proceedings of a conference for Directors of Special Education, past and present Regional Resource Center Directors, and the staff of the Bureau of Education for the Handicapped. E. Martin explains the rationale of Regional Resource Centers. A systems analysis of the client, the problem solving process, and the change agent is provided by R.G. Havelock. M. Meeker's discussion of a paradigm for diagnosis of cognitive functioning in special education is illustrated by profiles of various handicapped groups. L. Mann arrives at a primarily negative view of cognitive training after reviewing the history of ideas of cognitive functioning and considering issues related to current cognitive training programs. J. Tucker's analysis of ways to meet the needs of emotionally disturbed children supports such conclusions as that education should consider including additional programing in the areas of emotional import. D. Sabatino examines sensorimotor diagnosis of the visually or aurally handicapped, children fixated in the sensory-motor period of development, and children who have multiple handicapping conditions in relation to such concerns as the usefulness of diagnostic findings in planning curriculum. Sensory motor treatment for severely and profoundly retarded children is the topic of J. Jones' presentation. Human ecology and human care are discussed by W. Rhodes. (GW)

STATE OF THE ART

U S DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRO-
DUCED EXACTLY AS RECEIVED FROM
THE PERSON OR ORGANIZATION ORIGIN-
ATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT
OFFICIAL NATIONAL INSTITUTE OF
EDUCATION POSITION OR POLICY

DIAGNOSIS AND TREATMENT

ED107068

0072851

The project reported in this monograph was performed pursuant to a contract with the Office of Education, U.S. Department of Health, Education, and Welfare, Bureau of Education for the Handicapped, Contract No. OEC-O-9-252901-4539(608). The points of view expressed are those of the contributing authors and do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

EDITORS' PREFACE

Introduction

Public awareness and demand for equal educational opportunities and services for all children has stimulated new and revised education legislation at both state and federal levels.

Present and pending legislation has caused in-depth studies of, and improvement of, many laws, programs, and policies concerning equal opportunity education, especially educational programs and services for the handicapped.

Many states are in varying stages of planning and implementation changes in their educational services programs. State Department Special Education Division personnel are actively participating in the development of effective programs designed to meet the educational needs of the handicapped children in their state. The implementation of comprehensive educational services for the handicapped requires cooperation between local, state, and federal personnel.

Effective June 1, 1974 the United States Office of Education - Bureau of Education for the Handicapped (BEH) contracted a network of 13 Regional Resource Centers plus a coordinating office for the Regional Resource Centers to assist states in developing an intrastate capacity in regard to identification, diagnosis, and prescription of educational programs and services to handicapped children.

The Conference

The theme "State of the Art: Diagnosis and Treatment," was selected and planning for the conference began. Eight nationally-recognized specialists were commissioned to write and present papers to the conference participants. The Sheraton International Inn and Conference Center, Reston, Virginia, was chosen for the five day conference, September 20 - 24, 1974.

Participants invited to attend the conference included the Directors of Special Education of the fifty states, Samoa, Guam, Trust Territories, Puerto Rico and the Virgin Islands; the past and present Regional Resource Center Directors; the staff of the Bureau of Education for the Handicapped, or designated representatives.

The Conference monograph is comprised of Dr. Edwin Martin's keynote address to the participants, the eight commissioned papers, the "concerns" of the authors of the papers, and a directory of those who attended the Conference.

Copies of the monograph have been distributed to all Regional Resource Centers, Area Learning Resource Centers, State Departments, Special Education Divisions and the Bureau of Education for the Handicapped. Additional copies may be obtained from Coordinating Office of Regional Resource Centers (CORRC) Bradley Hall, University of Kentucky, Lexington, Kentucky 40506, Dr. Marty Martinson, Project Director.

Background

A recommendation of the First Annual Working Conference of Regional Resource Centers held in June of 1972 in Iowa was that a follow-up conference be held in the fall of 1973. The Iowa Midwestern Educational Resource Center (MERC) followed this recommendation by including in its grant renewal request, funds for a Second Annual Conference.

Proposed expansion of BEH's Regional Resource Center program from the original six centers to a comprehensive network of Regional Resource Centers precipitated some changes in the proposed conference format and time-lines.

The planning committee for the proposed conference was comprised of the six Regional Resource Center directors and Elwood Bland, Project Director, Learning Resource Branch, BEH. The directors were Judy Buffmire, Jim Crosson, David Hayden, Martin Hayott, Mike Robbins and Dick Petre. Mike Robbins was named Chairman of the planning committee.

Acknowledgements

We wish to express our gratitude to Elwood Bland, BEH, for his assistance and encouragement in the coordination and operation of the conference.

To the conference secretary, Ms. Sharon Carmody, thank you from all the participants and your co-workers.

The Conference program was developed and designed by Ms. Ann Bourgeois and the monograph was prepared for the printer by Ms. Linda Rohret.

Mr. Kay F. Kramer
Conference Coordinator and Co-Editor

Dr. Richard Rosonke
Conference Co-Editor

TABLE OF CONTENTS

EDITORS' PREFACE.....	ii
THE REGIONAL RESOURCE CENTER STRATEGY: SIX MEN IN SEARCH OF AN ELEPHANT by Edwin W. Martin.....	1
A SYSTEMS APPROACH TO CHANGING by R. G. Havelock.....	6
A PARADIGM FOR SPECIAL EDUCATION DIAGNOSTICS: THE COGNITIVE AREA by Mary Meeker.....	30
COGNITIVE TRAINING: A LOOK AT THE PAST AND SOME CONCERNS ABOUT THE PRESENT by Lester Mann.....	78
CONCEPTS RELATED TO DIAGNOSIS OF EMOTIONAL IMPAIRMENT by William C. Morse.....	113
MEETING THE NEEDS OF THE EMOTIONALLY DISTURBED by James A. Tucker.....	171
SENSORY-MOTOR DIAGNOSIS by David A. Sabatino.....	195
SENSORY MOTOR TREATMENT FOR SEVERE AND PROFOUNDLY RETARDED CHILDREN by J. Dean Jones.....	271
HUMAN ECOLOGY AND HUMAN CARE by William C. Rhodes.....	303
PARTICIPANT DIRECTORY.....	323
CONFERENCE PROGRAM.....	333

THE REGIONAL RESOURCE CENTER STRATEGY:
SIX MEN IN SEARCH OF AN ELEPHANT

BY

Edwin W. Martin

Acting Deputy Commissioner
Bureau of Education for the Handicapped

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

THE REGIONAL RESOURCE CENTER STRATEGY:

SIX MEN IN SEARCH OF AN ELEPHANT

The old fable concerning the blind men feeling the elephant and then describing its shape demonstrated that what a person thinks is "truth" depends to some extent on individual perceptions. So too, with the true nature of the regional resource centers. Those of you who operate such centers, day by day, and who are striving to both create and implement a concept which is still evolving, will naturally have the best perception and the best reality of what RRCs really are. Those of us in the Bureau will necessarily have our knowledge delimited by having to deal with the centers through abstractions, written reports, short site-visits, reports from others; and, to some extent, our perceptions will be colored by our thoughts of what such centers should be, as we conceived them in the abstract.

One important dimension of our communication during this meeting, and throughout our contacts should be to try to make our communication as effective as possible so that we can all share, to the maximum extent, the true nature of the centers. I'd like to share with you tonight some of our perceptions of this elephant, where we began and where we hope to go, and what is behind our thinking. Then, in turn, we want to hear from you, not only this weekend, but at any time as we continue to work together. The RRC program, like the federal programs of support for teacher education, research, early childhood centers, grants to the states, etc., are all part of a common strategy. They are all attempts to stimulate, encourage and assist in the process of providing appropriate education to every handicapped child in this country. The federal role is not one of providing massive dollar support to pay the salaries necessary for the personnel to teach our seven million handicapped children. That responsibility, and the responsibility for selecting program format and curricula has always been a state and local responsibility.

Instead, the federal role is based on uniquely national concerns, for example, "Is the pattern of services across the country so variable as to violate the Constitutional tenant of equal protection under the laws?" Or perhaps, "Is there a unique advantage to national government being involved in certain efforts because of what the economists might call "economies of scale"? That is, are there certain advantages to approaching some problems on a national rather than state level, for

example, having a national competition for model programs so that greater diversity and richness might result, or in another instance, using the federal government's purchasing power to provide films for the deaf, or braille materials for the blind?

Basically, federal efforts have been seen as stimulators of local efforts, through providing support for teacher training, for beginning model programs, and for the interchange of information between professionals across state and regional lines.

The RRCs, then, represent one strategy being employed at present to try to speed the day when all handicapped children are appropriately educated. As such we must always hold them up to scrutiny and ask ourselves questions such as "Is this strategy a good one, and how can we demonstrate that?" or "Would we achieve our goal more rapidly if we invested the same dollars in other strategies?" In essence, then, the goal of the BEH support is not to build or institutionalize RRCs for their own sake, but rather RRCs are seen as experimental means to the desirable end of quality services to children.

When I first heard of RRCs it was in conversations between Congressional staff members and folks from the Bureau. It was hoped that a regional center program would be able to develop new methods for diagnosing the learning problems of handicapped children and for working with their teachers to help them more effectively understand and teach their charges. Although, there were undoubtedly as many variations of the basic intent as there were people involved, basically the centers were seen as assisting teachers rather than merely being big diagnostic centers. The diagnosis and appraisal activities would be a practical laboratory for learning on the part of the staff and for their teaching of others.

Because there were to be model programs, rather than strict service delivery, there never was too clear a notion of how many children and teachers might be served, and over what geographic distance; but it did seem desirable to have some of these experimental centers in different areas of the country, i.e., rural, or urban, and perhaps serving different specialized clientele, for example minority groups. The idea never was to set up a federally supported delivery system, but rather to establish models that might stimulate local communities, perhaps one or more counties or even areas within cities, to develop similar programs. My own perception, when I entered the picture, focused on the centers as alternative models for the administration of special education programs. I could imagine a system of consultants and specialists operating out of a center helping handicapped children be educated in regular classrooms, rather than in special classes. Others, I know, were less concerned with that idea, and more impressed with the very difficult job faced by special class teachers; and they wanted to

build a resource system to help that teacher solve the really tough problems that might be beyond his or her training and experience. All these ideas and many more became part of the evolution of the centers.

In the first years of support grantees developed their own implementation plans from these rough outlines of objectives, and refined them through conversations that went on among grantees and with the Bureau, through their own experience and through continuing input from colleagues. From our perspective, the early efforts were marked by diversity, creativity and unevenness--really all the characteristics of experimental efforts. At the same time the Instructional Material Centers were independently developing along similar lines and some intersections of function began to appear. This, in turn, led to a review of the state of the art concerning each cluster of centers, and to a number of efforts to think through the roles, functions, objectives and coordination of such programs. From this process which involved site visits, conferences, third party reviews, position papers, a few arguments and perhaps even tears, emerged this generation of the RRC development plan, which you are helping to realize.

The current workscope for each center has common elements, a natural evolution from the developmental stage where each center did its own thing to some degree. These common elements helping develop similar programs in local communities, expanding the art and capacity for educational appraisal, developing educational programs, and sharing information, represent the functions which grew out of the experiences in developing the prototype centers, and out of all our attempts to determine what activities might be useful in meeting our goal of services to children through using the unique resources of the federal government.

This leads us to today. I am sometimes asked by center directors or others in the field: Does BEH have a commitment to the RRCs? How secure are they? Can't we do something to make the staff members feel less apprehensive about their future, etc.? In a very real sense I can't, although in another sense I feel we must do everything we can to create the relatively stable and secure climate necessary for success.

In the final analysis, however, we are not committed to the Regional Resource Centers as permanent federally funded activities. We are instead interested in learning if there is a need for an ongoing federal role. I think most of us know, or at least believe, that programs which might be called resource centers have a useful role to play in communities as direct service providers. Many counties, intermediate districts, and in fact single local communities have developed or can develop a centralized capacity for appraisal, technical assistance, educational programming, etc. What remains to be demonstrated is whether there is a need for state or regional programs, other than as demonstration models. After the demonstration period, then what?

Perhaps our federal job is done. Alternatively, perhaps there are some functions in the area of research or development, or transmission of unique knowledge or methods, which would justify ongoing federal efforts. This is what we hope to learn from and with you. We feel, and our future plans indicate, that support of RRCs will help local and State agencies build their capacity to serve children. Unless there is a sharp change in Congressional and Executive perceptions of the federal role in education of the handicapped, the federal government will not be a major service supplier, but rather will continue the role of capacity building of catalyst.

As we look at the state of services for children today there are many gaps and failings where RRCs may assist. There are by no means sufficient programs for the early detection and appraisal of learning problems and related handicaps in preschool age or school age children. There are, in most communities, no agencies to which parents may turn for support and guidance in planning for their child's educational needs and for the related services which so many handicapped children will require. The need for these "direction" centers and programs has been strongly emphasized by Rand in its report to us on the state of services for handicapped children. We are just beginning to think about effective vocational training and placement for handicapped young people, and there is a great need for effective, comprehensive program planning and also for individual appraisal and programming. The increasing emphasis on mainstreaming is accelerating the need for resource services, and these are but a few of the challenges which you as program developers will face.

We want to give you a stable foundation to explore and to provide evidence for the value of the resource center concept and for the federally supported center if the data so indicates, and our three year contracts with you should provide that stability. Your reports to us will allow us to make the case to HEW analysts, to OMB and ultimately to the Congress, that this particular investment is educationally beneficial and cost beneficial, and so should be extended for additional periods. I urge you to make every effort to develop good evaluative measures of your productivity, and to work with us in developing fair and useful ways of appraising the program and evaluating the RRC strategy. I appreciate, as does each person in the Bureau, your commitment of your talents and your professional lives to this effort. We thank you for it, and we look forward to working with you.

A SYSTEMS APPROACH TO CHANGING

BY

R. G. Havelock

University of Michigan
Ann Arbor, Michigan

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

BIOGRAPHICAL SKETCH

Ronald G. Havelock is Program Director of the Center for Research on Utilization of Scientific Knowledge in the Institute for Social Research at the University of Michigan at Ann Arbor. He holds degrees from Harvard College and Boston University, and his professional activities include numerous national and international experiences and publications dealing with communications, innovation, and information dissemination. As an associate professor, he has conducted numerous research projects, lectured, and taught courses at the University of Michigan.

Dr. Havelock is working this year on a project sponsored by the United Nations Educational, Scientific and the Cultural Organization (UNESCO). The project, located in Geneva, Switzerland, deals with communications and dissemination of innovations in underdeveloped countries.

AUTHOR'S CONCERNS

A Systems Approach to Changing: Ten Issues

Set #1 Analysis of the Human System

1. Who is the Client? Who are the people we should be working with directly? Who must be considered an integral part of the client system even though we are not working with them directly? Who should be defined out of the client system? Who are the important people and groups outside the client system but within the relevant social context who must be accounted for in some way in a systems analysis?
2. What are the prevailing norms and values of the client system? What is the attitude toward change in general?... toward particular changes? By what signs can we gauge these attitudes? What beliefs or values support or favor the change? Which might tend to oppose or undermine a change effort? What is the level of solidarity or cohesiveness regarding values? Are there major factions or divisions of opinion?
3. What is the Social-and-Communication Structure of the client system? Is there a formal hierarchy? Is it accepted? Who are the informal opinion leaders? How do we find them? Who are the innovators? Are they allied with opinion leaders? Who are the defenders of the status quo? How do they relate to the opinion leaders? How well integrated is the client system? What are some signs of this? How do members communicate? What media do they use?... How often? Does the system as a whole need restructuring? How do we determine if this is needed?

Set #2 Analysis of the Change Project System

4. How do you make a good problem diagnosis? Whose definition of the problem do you accept? What are the symptoms? How do we probe for underlying causes? How far should we probe? How do we assess consensus on the problem within the client system?... between them and us? How do we identify strengths as well as weaknesses? Is there such a thing as too much diagnosis? How do we move from feelings of concern or disturbance to definitions of need and then to concrete goal statements? How do we get collective participation in diagnosis?

5. How do you acquire relevant resources? How do you determine the availability of resources internal to the client system?...external to the client system? How do you assess the adequacy of information resource linkages? What kinds of resources are needed for which phases in the change process? Where are such resources obtainable? How do you build a capacity for continuing resource retrieval by the client system?
6. How do you choose appropriate solutions? How do you bring out the best ideas? Who should participate in this process? What criteria do you use to choose? How do you adapt a chosen solution? How do you prepare for a try-out? How do you gain acceptance for a solution before it is tried out?
7. How do you try, test, and evaluate a chosen solution? Is evaluation always necessary? How much emphasis does it deserve? How do you choose an appropriate design?... criteria?... measuring instruments? Who can and should participate in evaluation? Who gets the results and how should they be used?

Set #3 Analysis of the Change Relationship

8. How do you manage the first encounter? How do you decide whether you should work with a particular client?... or to work on terms defined by him? Which members of the client system should you work with to gain the strongest leverage for change? How do you maintain a relationship over the life of a project? Do you need a contract?
9. How do you build a change team? What are some advantages of being an insider?... an outsider? How do you put them together? What are some alternative postures or role models for a change agent? Which types are most needed on the change team? What types of power and influence are needed? How do you weld the team together?
10. How do you generate a self-renewal capacity in the client system? What can be done to change the value orientation of a client toward continuing self reform? What sort of training is required? What sort of team building? How do you build linkages for internal mutual helping?... for reaching out for help to others besides yourself? How do you establish new roles and sub-systems for change within the client system?

A SYSTEMS APPROACH TO CHANGING*

Perhaps I should begin this presentation by admitting that for a long time I was not really sure what was meant by a "systems approach." I have seen this phrase used over and over again by people who seemed to have very different conceptions, and often they appeared to use very elaborate formulas which I had trouble following. I felt that perhaps I was missing something; perhaps there was some graduate course which I hadn't taken which introduced all sorts of esoteric concepts and provided a special set of tools to unlock untold mysteries. Then I found, somewhat to my amazement, that people were beginning to call me a "systems" theorist. Sure enough, I had used the word "system" often in my writing, but I had only used it, I thought, in very simple sense. I had used it to refer to a group of people who were working together toward a common objective, or to refer merely to a group of functions or objectives which had some interrelationship.

Having read a little more about systems theory, I have become reassured that there is no great mysterious discipline from which I have been excluded, and I would urge you, my audience, to be equally demystified. My conclusion is that a "systems approach" really means a simplified approach. To think in terms of systems is to systematize, to bring some order to things that at first seem to be chaotic.

For the past decade I have been trying to study the process of change and particularly the process of deliberate changing, whereby one group of people tries to change another by helping them giving advice, listening, communicating, disseminating research findings, applying R&D, manipulating, planning, ordering and so forth. My intent was to study what had been written by others, to try to order this wisdom in some reasonable fashion, and then to conduct new studies on on-going change activities. Thereby I hoped to expand our knowledge and to derive new principles of changing which would help improve the process, from the point of view of both the change agent and the changes. In following this course, I think I may have unwittingly become a kind of systems analyst of the change process. In any case, what I have tried to do is

*Specially prepared for the National Regional Resource Center Conference sponsored by the Bureau of Education for the Handicapped, USOE, Dept. of Health, Education, and Welfare, Conference Center, Reston, Va., Sept. 20-25, 1974.

to simplify and to systematize our collective wisdom on the processes of changing so that they can be studied more coherently and so that would-be change agents can have a few tentative guidelines for the practice of their craft.

In this paper I will not review the theories or the research findings which are relevant to the subject.* Rather, I will offer a personal view of what systems analysis is all about; then I will suggest some implications of this view for change agents, and finally I will propose some practical ways in which these principles can be used.

First of all, what is a "system"? In the abstract it is merely a set of things which go together. Thus a systems analysis is a description, first of the pieces which go together, and, second, the ways in which they go together. In concrete terms we could describe a house as a system. The pieces of the house are the familiar walls, roof, foundation, wood, bricks, cement blocks, furnace, plumbing, etc. Obviously an inventory of these materials gives a very unsatisfactory picture of a house; but put the inventory together with blueprints and a description of the steps involved in construction and you have a systems analysis. The house, itself, is an intricate system; although it is static and essentially closed, all the pieces are related to one another and they all go together to serve a broad set of functions for human beings (another type of system). They provide a shelter, place for sleeping, eating, playing and working, for binding together the family (another type of system), for rearing the young (another type of system), for meeting friends, relatives, associates, and for parties and celebrations (all temporary systems).

Yet a house is a relatively simple system. In contrast, consider the human being. For about a century, now, our physiologists have been able to give us a crude but grossly accurate systems analysis of the human body, identifying the major organs, and the major subsystems and structures; and they have known how they relate to each other. Yet we have only recently begun to understand the microstructure of cells, hormones, and genes whose interactions underlie the gross system, and we still are uncertain about the overriding purposes for which this magnificent system is assembled. Nevertheless, I doubt if there would be much argument that the human is a system and that systems analysis of humans has been a rather useful pursuit.

*For a comprehensive review and synthesis of research and theory on this subject see Havelock, R. G., et al., Planning for Innovation, Institute for Social Research, University of Michigan, Ann Arbor, Michigan, 1969. For an excellent analysis of over 1000 empirical studies on the change process from a communication perspective see Rogers, Everett with Shoemaker F. F., The Communication of Innovations: The Free Press, New York, 1971.

But now we must step into muddier waters. There is this thing sometimes referred to as the "social system," which is made up of individual human beings and their interrelationships. But, alas, this so-called "system" does not have the same clarity. Pieces come and go; the elements get rearranged; the relationships and the functional interrelationships are not always clear. Sometimes the social system fragments and the pieces do battle with each other. Nor is the definition of "social system" ever very clear; the boundaries sometimes are obscure or arbitrary; furthermore, social systems tend to overlap one another, making a crazy quilt of interrelationships of indescribable complexity. Hence, at the social level, systems analysis is more difficult and more controversial and its value more open to challenge.

Now we can step from the muddy waters of social systems and analysis into the swamp of what might be called event systems, that is, periods of time in which things happen. These periods may include interactions among all sorts of other systems including houses, humans, and social systems. There is a presumption that there is a beginning state of affairs and an end state of affairs; all the events in between are supposed to be related to one another in some kind of sequence so that we can call the beginning the "cause" and the end the "effect." But there are some further complications. It is really very difficult to say with certainty exactly when such systems begin even harder to say when they end; they may involve entirely different people at different times, and just who or what is inside or outside such a system is seldom clear.

Unfortunately, it is this last type of system that is most relevant when we are thinking about processes of changing, but if it is such an arbitrary and slippery concept, why bother with it at all? I think the answer is clear. It is not the concept which is troublesome but, rather, it is the reality with which we are trying to cope. System concepts at a minimum are empty imaginary frames with which we can divide up experience into manageable pieces; just as the landscape artist views his scene and frames his picture in his head, we try to pick out sensible segments of reality that seem to go together, knowing that there is a larger reality that we are cutting across at the top and at the bottom and at the sides. I believe we must have these frames; we cannot cope adequately with our experience without them, especially when we are trying to develop a sensible strategy of changing, of helping people to improve their situation through better problem solving and resource utilization.

At the same time it is important to remember that the frames are laid down in an arbitrary manner. This arbitrariness has two implications for the systems analyst. First, there is always a "context" or "environment" that we need to worry about, i.e., the part of reality that lies outside the frame. For the dynamic systems about which we are concerned, there is a constant interaction between events inside and outside the frame; a world-wide inflation, a Watergate, a teacher's strike,

or a change in organizational leadership may affect our plans for change in a particular school or community even though these events were in no way influenced by our project. There will also be a constant flow of people and material in from the environment and back out to it. A good systems analysis makes allowances for environmental or contextual factors; indeed, it tries to put some additional frames on them such as dividing them up into political-economic-and-social, or national-state-and-local, or manpower-material-financial-technical.

A second implication derives from the fact that systems frames are laid down in an arbitrary manner: we must always be ready to shift the frame. The landscape artist does not pick out his subject as a random rectangle from the panorama; rather, he tries to find a segment which has some coherence. Such a selective process is even more imperative for the systems analyst. For the analysis of individual persons or bodies as systems this is a relatively simple matter. At least we have the skin as a guideline; but in defining a frame for a change project our first estimate will almost surely be wrong! It may be too large, i.e., we may have defined a project which includes too many activities, too many goals, goals which are too ambitious, are for too many people, or are for too long a period of time. On the other hand, the frame might be too small, including goals which are too limited, too narrow, or for too small a number of people. The size of the frame is not the only problem, however, it may be that the frame is simply in the wrong position. What is the real beginning point of an activity, for example? Is it when we first meet the client? When he has stated his problem? When we have signed a contract? When there is a beginning of funding? When a plan has been drawn up and agreed to? All these are sensible beginnings, and for different kinds of projects different definitions of the starting point are probably appropriate.

The crucial point is to recognize the arbitrariness as well as the usefulness of systems techniques. People who propose schemas for systems analysis will always offer up a certain number of stages and a certain number of elements to consider, usually in some rational sequence. Yet what is never emphasized enough is the need to continuously rethink the schema and to reapply the concepts in different ways. None of these schemas should be chiselled in stone. All should be applied tentatively, as first, approximations and then as second and third approximations.

All this is by way of introduction and forewarning for my own proposals. I am an advocate of systematic analysis of problem situations and systematic approaches to planning and conducting change efforts. In this paper I will propose a ten-point plan for such analyses. But, please treat it loosely and flexibly. The important thing is to think in terms of systems, not to follow them religiously.

I believe that a systems approach to changing must include consideration of three types of systems which exist simultaneously: These are

the client system, the system represented by the change project, and the system represented by the team which is working together to bring about the change. The three systems are similar to each other in some respects. Each has boundaries; each represents a set of elements which go together and which interact upon one another to produce or maintain an equilibrium state, an end state which is seen as desirable or satisfying in some way; each thus can be seen as a problem solving mechanism. Each also has commerce with a larger environment, receiving input in the form of ideas, people, material, finances, requests, orders, rules, etc., and expelling output in like forms. Each also has a set of internal relationships among its various parts that allow the problem solving to go on, that allow the processing of inputs into outputs, and that allow the maintenance or achievement of the equilibrium. These similarities are something to ponder, but I would guess that such an analysis is a little too abstract.

Assume that you are a change agent; you have been called in or have called yourself in to a situation where there is a need for change, and you have some sense that you can contribute. If you are thinking in terms of systems, you will do three things. First, you will think through rather clearly who it is you are intending to serve. Who belongs to this system? What are their major characteristics as people? And how do they relate to one another? Right there you have one kind of systems analysis. Then you should ask: what is the nature of their problem and how can we move logically and progressively toward a solution to that problem? That is the second type of systems analysis. Third you need to ask who will do this? What is my role and who else will work with me to come up with the solution? This, I suggest, is another type of systems analysis. Now let us consider each of these systems analyses in more detail.

Systems Analysis #1

Analysis of the Human System

1. Who Is the Client?

Who is the client? At first glance this may seem like an obvious and trivial question, but for many of the helping professions it may be very important and, if it is not answered clearly, all kinds of problems may result. To the physician or to the lawyer this may seem simple enough; the client is the person with the symptom or the problem who comes asking for help, or who pays the fee. But, of course, fees are often paid for by somebody else, and treatments and solutions may involve several people. Thus, long ago it was recognized in the psychiatric care of children that the child alone was not the patient; one or both parents or the entire family had to be considered together as the unit under treatment. Thus, the family as a system, rather than the individual,

had the problem. Similarly, in all the helping professions we have expanded our conceptions of the real client to include all those who are directly involved in causing the symptom or who must be involved in providing the cure. So my first dictum here would be "Don't think too small." There will usually be one person or a small group with whom you first discuss the problem. During that meeting you should ask as many questions as possible about the various people and groups which have an active interest or potential interest in the problem and its solution. They may represent problem causers, they may be people holding key resources, they may be solution implementers, or they may be the beneficiaries of a happy solution. Then, after this initial encounter, it might be a good exercise to list all these people and groups and to check off from that list those whom you think should be in your client system and those who should be outside.

Now, my second dictum would be, "Don't think too big." You probably shouldn't check off everybody on that list as someone with whom you will be working directly, because (a) you don't have the capacity to work effectively with everybody, and (b) not everyone is equally involved in this one problem. Thus they may be seen as important forces in the social context which have to be assessed and monitored, whose actions and attitudes need to be predicted, but with whom we will not have direct interactions.

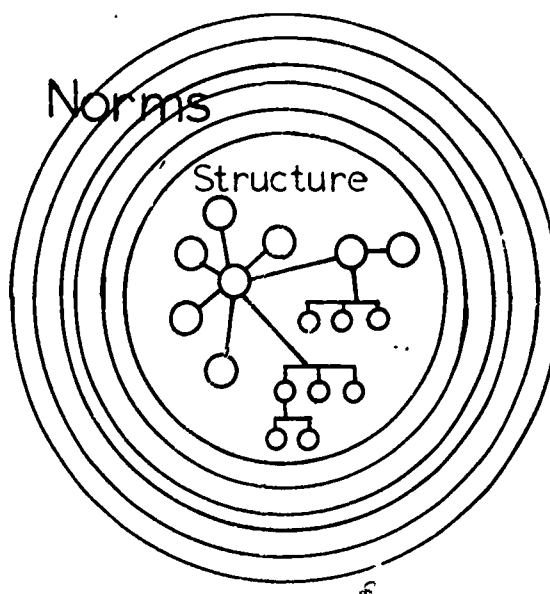
Still regarding this first question of "who is the client?" I would lay down a third dictum: "never be too rigid in responding to this question." Of course, it is important to define the client clearly and to stick with that definition through the beginning stages of a change relationship; but as you collect more information you are likely to find that your initial definition was naive. You may also find that, as you progress through a problem solving cycle, you will want to expand your definition. For example, you might begin in a situation in which you are working alone with one child who has a particular handicap. The child alone is your client system. But as you gain some rapport and as you gain a better grasp of the problem you may bring in the parents. Now they, too, are part of the system. Now you may bring in a teacher or a counselor within the particular school setting and you will work together with this person, perhaps modelling some therapeutic techniques. Now your "system" has become not just a family but a larger social mechanism which provides services to many children and many families over a period of time. The good change agent should always be alert to opportunities to expand in this way the client system whom he is serving. He thus expands the total capacity to provide services beyond the limits of his own direct interventions.

Having defined our system, what else do we need to know about it? At the risk of oversimplification I will suggest just two broad questions: first, What are the prevailing norms? and, second, What is the structure? I'm not sure that there is a good way to picture these two types of

questions but Figure 1 may be suggestive. The outer rings suggest norms, that is, attitudes, values, beliefs, and modes of behavior and thought that are shared by the members of the system. These shared norms describe what it means to be "us" instead of "them." Most social systems maintain their group identity through the mechanism of local pride which identifies what "we" have as special, as most important and most relevant. This belief that "we are unique" can be a measure of the strength and the health of a system, but it can also be a major stumbling block to change, and it may hinder both the awareness of a need for change and the acceptance of useful ideas relevant to local problems which come from outside.

Figure 1

The Norms and The Structure of the Client



2. What Are the Prevailing Norms and Values of the Client System?

I do not assume that the change agent is an anthropologist or a sociologist. He is not engaged in research on the client system; thus an exhaustive inventory of norms would not serve his purposes. What then, are the crucial questions? The first set of questions I would suggest concern the norm regarding change, itself. Is this a conservative or a liberal client? Is there a history of accepting change?

Of using outside help? Of inventing solutions? If a client system approaches change cautiously and suspiciously, we, too, need to be cautious and tentative and we should be thoroughly armed with facts and sensible justifications for proposed actions. If the client has a history of antagonism to change or of passive but smothering resistance, we may want to take our wares elsewhere.

A second set of questions would relate to norms in the particular area of the problem at hand. In the area of handicap, for example, there are likely to be some rather distinct attitudes which will vary from culture to culture. In some cultures it is something to be ignored, in others it is to be segregated or in others it is to be pitied. Particular handicaps may evoke compassion or fear or disdain or combinations of these. It is worth noting which of these attitudes tend to be shared by members of the client system, and furthermore, which will tend to facilitate and which will tend to inhibit the contemplated change effort. Such attitudes may well condition both the choice of a solution alternative and the strategy of introducing the change. Often the attitudes, themselves, will be appropriate targets for change efforts. Ultimately, however, there can be no lasting fundamental changes in behavior and practice without accompanying changes in attitudes.

A third area of questioning concerning norms might involve the extent of solidarity exhibited by the system in supporting various norms, or in uniformity of this expression. Obviously not all beliefs will be shared to the same extent; still less will they be vocalized to the same extent by different members of the system.

3. What is the Social-and-Communication Structure of the Client System?

The first thing that might occur to us under the notion of structure might be the organizational chart; if such a chart exists it can tell us a great deal about formal relationships and, at a minimum, it can suggest a number of hypotheses about relative power of different members of the system. It may also give us a start at understanding functional relationships, i.e., the way labor in the system is divided, the ways in which the work of the system gets done, and the way problems are solved. In any case, if there is such a chart we should examine it and ask questions about it. If there isn't one we should ask a knowledgeable insider to draw one.

However, this is only the beginning. It is also important to understand informal relationships, particularly among peers. In a school, for example, there may be any number of teachers or counselors with nominally the same status. Yet some of these will be more influential than others either with their colleagues or with the administration or with the parents and the community and so forth. It will be nearly impossible for the change agent to trace all these relationships, to identify the stars and the satellites and the isolates, but some sort

of assessment should be made. The reason is simple. Countless studies of change attest the importance of the opinion leader. Most people change effort directed at an isolate or at a person without informal influence will usually be wasted.

We should also know how people in this system typically communicate. Members of a system are bound together by their communications and there will be certain preferred modes. Change agents likewise must learn to use these channels effectively. They may also perceive that existing channels are inadequate and need to be supplemented with new ones. For example, you may find that members of a client system never have face-to-face meetings or that such meetings are perfunctory, never raising or exploring fundamental problems.

Finally one needs to ask how well integrated the client system is. Is it truly a system? Does it see itself as a system? Does it act as a unit? Is it capable of a unified response to internal or external threat? Is it capable of a unified approach to problems and their solutions? We will find that for most so-called "systems" the answers to these questions will be at least partly negative. Thus an initial task for the change agent may often be merely to bring the members of the client system together, to allow them to see each other as interdependent, as sharing a common problem and common resources, and, in short, to see themselves as one problem solving system.

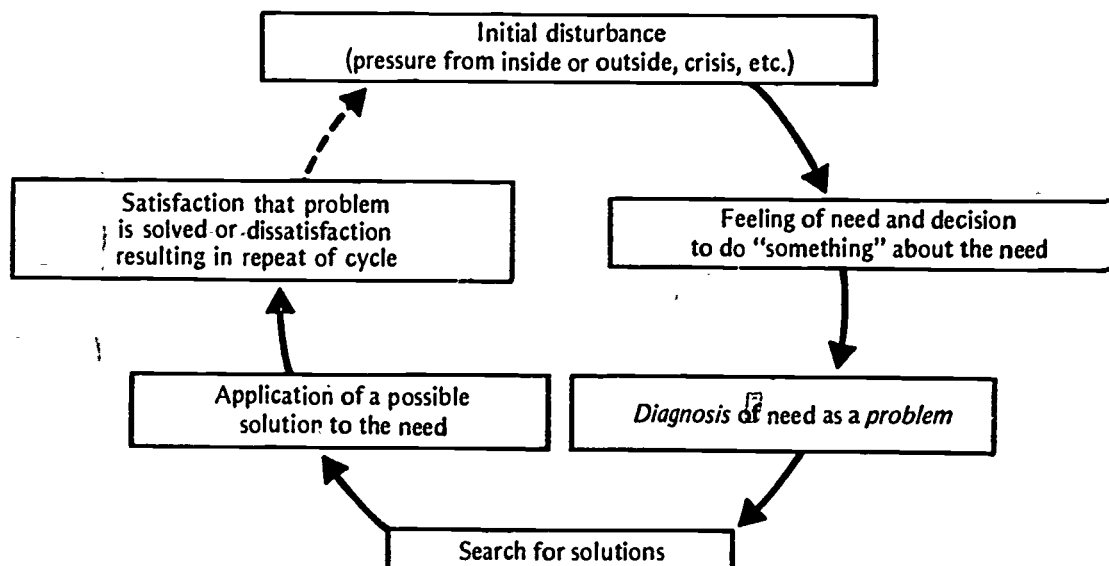
Systems Analysis #2

Analysis of the Change Project as a System

Now we turn to the type of analysis to which I think most systems analysts refer as a "systems analysis." However, I would prefer to call this the "problem solving process" or the "steps in problem solving." There are many different schemas, but they are similar in fundamentals. They start with a problem situation which is defined as carefully as possible so that clear-cut solution objectives can be set. Then progress toward that solution is charted out in a series of logical steps, including acquisition of resources, fabrication of solution alternatives and testing and evaluation of one or more alternatives within a specified time frame. Sometimes these steps seem so logical and precise that it is hard to imagine anything going wrong; but more sophisticated models allow for iterations, that is, repeated cycles at various points until the right solution emerges.

Figure 2 describes one such problem solving sequence and suggests the cyclical nature of the process. Notice that this figure says nothing about who the client is or the nature of the group which will go through these steps. The process begins with a disturbance, a disequilibrium which impels some sort of action. In the simplest of problem solving

Figure 2
Change by Rational Problem Solving



systems the first action is a solution attempt. For example, I am hungry, I eat; I feel tired, I go to bed; my back itches, I scratch. But our tougher and more complex problems require a more extended procedure. For the purposes of this paper, I will compress what I feel are the essential steps into four: diagnosis, resource acquisition, solution choosing, and solution testing.*

4. How Do You Make a Good Problem Diagnosis?

Perhaps the most important thing to remember about making a diagnosis is to beware of the obvious. At the outset the most obvious "problem" will be the statement of need expressed by the first-contacted client or

*For a much more elaborate treatment of these concepts in the form of a change agent's how-to-do-it manual, see Havelock, R. G., The Change Agent's Guide to Innovation in Education, Englewood Cliffs, New Jersey: Educational Technology Publications, 1973.

client representative. But most problems come in several layers. This initial concern which led to the contact is likely to be only the surface layer. While it is valid and sometimes appropriate for the change agent to work only at this level, it is usually better to at least make a brief survey of the surface symptoms. You should therefore ask what other things are not-quite-right in the client system at the present time and perhaps also in the past. If the presenting complaint is "low achievement scores" by a certain group of problem children, it would be well to look also at the absenteeism, racial tensions, teacher turnover, parent support for schools, and so forth. When these various problems are enumerated, do they go together in any way to form a pattern? You may also wish to develop hypotheses about underlying problems for which many of these surface problems would be symptoms. Regardless of the depth of such interpretations and the strength of his conviction concerning them, the good change agent is sensitive to his client's self-perceptions and he is willing to examine the problem in the same way.

In making a diagnosis one should also avoid too heavy an emphasis on what is wrong with the client. There will always also be areas of strength and areas where the greatest potential for change or growth exist. An accent on the positive also may make the client feel less defensive and more hopeful that change can be beneficial.

I would also caution against too much diagnosis. Sometimes the change agent will get stuck on defining the problem, using up his time and energy. Diagnostic study can also be used by a client as a way of stalling or putting off needed changes. Thus, the more progressive members of the client system may understandably become restless and suspicious of prolonged diagnostic activity.

A final point regarding diagnosis, which will be reiterated, concerns who should make it. It is not the sole responsibility of the outsider called in to provide the diagnosis. This is the old medical notion but, it is inappropriate in most problem situations. There should be some form of collaboration on deriving the diagnosis so that there will be a consensus on what it is. This may require joint data collection activities and analysis as well as discussion and sharing among key persons.

5. How Do You Acquire Relevant Resources?

A diagnosis will often point to a particular solution. Sometimes this may be so obvious and simple that search and selection activities are entirely unnecessary. I would urge, however, that the prudent change agent resist the temptation to jump on a solution bandwagon too early. There should first of all be a search for resources relevant to the defined problem. Almost always, nowadays, this search should include a search of the ERIC files, aided by a dialog with a trained search specialist. The ERIC system allows a scanning of all types of source

materials, descriptive, evaluative, and practical, on virtually every educational problem. A review of the most salient documents emerging from a search will provide not only factual substantive information but also the names of people who might be contacted, either because they are experts or because they have had practical experience with one program or another.

Resources come in many forms, as printed information, as money, as people with various skills, as materials and products. A change activity may well involve all these. Fortunately we live in a country which is resource-rich in every sense. Thus, resource acquisition is largely a matter of finding where something is or who has it. It is important to consider resource availability both inside and outside the client system. The best solutions tend to emerge from a meshing of the two. Indeed, an exclusive reliance on either inside or outside resources or on resources of a particular type are all signs of a feeble and inadequate problem solving process.

Clients should not be oversold or undersold on the value of various resources. Any resource should be approached with a realistic view of what it can provide. The person who depends too heavily on one resource for a total solution to his problem is bound to be disappointed. For example, a descriptive or promotional piece will probably not tell you much about the knitty-gritty of implementation but it may give some images of the potential of the innovation which will be entirely lacking in an evaluation report by a researcher.

If the problem and a possible solution have both been well identified, then there are six steps which I would suggest as necessary to complete a resource acquisition strategy. First, get an overview of the innovation from written sources, preferably including more than the strongest advocates or salesmen. Second, contact at least one person who has had direct experience with the proposed change. At a minimum if this person is far away conduct a long telephone dialog with him, establishing the extent of his experiences and checking over a list of doubts or points of concern. Third, observe the innovation in practice, i.e., in its concrete, live form, if it can be observed anywhere near you. Of course, the site visit is something that all relevant decision makers in the client system should participate in, if at all possible. Fourth, obtain evaluative data, preferably from an expert source independent of the promoters of the change. Fifth, if it is appropriate obtain the innovation on trial or in sample form so that it can be tried out in a limited fashion without total commitment. Finally, acquire a framework for evaluating the results of your own trial so that you can tell whether it works or not, and how well, at what cost, etc. This may require the short-term use of an outside evaluation expert.

6. How Do You Choose Appropriate Solutions?

With a problem and a lot of relevant information the client needs to be able to derive implications and settle upon a potential solution. This is the most creative and interesting task in the process of change, but it is a task which most change agents understand very poorly. Very few people are good at generating a range of solution ideas even when they have a fairly clear idea of what they need.

Some solutions will be suggested more or less directly by the diagnosis or by the statement of objectives. Others may fall into our laps as a result of a good and comprehensive search process. Where good solutions are readily available from other programs and projects, it may be wise to use them, but it is also advantageous for a client system to generate its own solutions. This should not be a matter of "reinventing the wheel." In fact, I would advocate a thorough study by system members of existing solution ideas prior to generating their own. Thus, it may be more a matter of building on what exists, adapting and combining ideas from various sources to produce something that is appropriate to the client's own unique circumstances.

Regardless of the sources of solution ideas, it is important to generate more than one alternative. A range of alternatives gives the client freedom of choice and an opportunity to make rational and meaningful decisions. In assembling this range of alternatives, practicality or feasibility should not be the first consideration. Rather this should be a mind-stretching experience for the client. He should be led to start thinking of possibilities that may never have occurred to him before.

As noted earlier, a focus on areas of existing strength and "opportunities" in contrast to problems adds a new and hopeful dimension for many clients. "Opportunities" may suggest solution possibilities already available within the client system but not previously seen as relevant to the problem area.

Another approach is to model an ideal solution, at first perhaps in fantasy, but then trying to fill in the details and steps of how to get there. This exercise may open up new vistas for the client by demonstrating that optimal solutions are at least conceivable; this can be a tremendous stimulus to constructive thinking.

Brainstorming is a specific technique for generating solution ideas in a small group. There is probably no faster way of freeing up thinking and creating bright images of potential solutions.*

*See Havelock, R. G., 1973, op.cit., p. 104-106 for more detailed discussion of brainstorming.

Having generated a range of solution ideas, we can begin the task of choosing or selecting. "Choosing" really means mental testing and comparing, applying criteria, eliminating some possibilities, modifying others, and combining others. There are three broad criteria which should govern our thinking at this stage. The first is benefit. Who will benefit? How much? How long? Together with benefit we must consider cost in money, in effort, in man hours, in known or potential negative effects, short run or long run. A second set of criteria relates to workability. Will the proposed change actually perform as promised in our situation? Will it perform reliably? Are the costs in reasonable proportion to the minimum expected benefits? A third type of criteria I call "diffusibility" or acceptability to the client system as a whole. Is it compatible with local norms and values? Can it be explained in terms that can be understood by all relevant members of the system?

Of course, there is no certain way to tell if an innovation meets all these criteria without some sort of trial and this brings us to the last of the four steps in the project system analysis.

7. How Do You Try, Test, and Evaluate a Chosen Solution?

Even before an actual trial effort takes place, the client system should be committed to a plan for evaluating the trial, and making a "go-no-go" decision. This is critical because, all too often, a so-called "trial" experiment results in permanent adoption simply because the client has no plan for evaluating and, if necessary, rejecting what does not work; he accepts the change because it is a fait accompli and for no better reason.

In establishing a framework for evaluation, you can start with the three sets of criteria proposed above, benefit, workability, and diffusibility. Criteria used in available evaluation reports and studies may also be useful. Of special value are research evaluations which use the fulfillment of specific behavioral objectives as criteria. Because of the specificity and observability of such measures, there should be less trouble in adapting and interpreting them for use in your setting.

While much has been written on the subject, I am not satisfied that anyone has yet come up with the ideal approach to quick-and-dirty program evaluation. Most schemes are too elaborate, too research-oriented, and perhaps too rigorous and technical for use in most modest-scale problem solving and change projects. It is nice to have a good randomized design and the help of an university team with statisticians and so forth but it is usually not practical. I would offer a few modest rules. First, look for something that is measurable that you expect to change for the better; try to collect information on this variable before, during, and after the change is tried out. Second, interview at least three more or less representative people from the client system on how

Systems Analysis #3

Analysis of the Change Relationship

We have now looked at two types of systems analyses that should be made; the system which is the client and the system which is the problem solving process. However, we have noted at several points the need for communication with the client, or various members of the client system to define norms and structure, to reach consensus on the nature of the problem, to build local initiative for resource retrieval and local creativity in generating solution ideas. Finally, we noted the need for agreement or evaluation criteria. All these points suggest one overriding area of concern for the change agent, his relationship to the client.

How does this relationship come into being? How can it be nurtured, regulated, limited, expanded? redefined? terminated? These are the questions to be answered by a third type of systems analysis which combines aspects of the other two. On the one hand, it is the analysis of human relationships, but on the other hand, it has to be a sequential analysis which starts with the first encounter, proceeds through the four problem solving steps and concludes beyond them in what may either be the termination or the self-renewal phase.

Again at the risk of some distortion, we can compress this analysis into three issues: managing the first encounter, building a change team, and generating a self-renewal capacity.

8. How Do You Manage the First Encounter?

Whether you are aware of it or not at the time, the very beginning stages of a project have a disproportionate influence on all other aspects and stages which will come later. Initial impressions and expectations on both sides are hard to shake and initial commitments are hard to break. Simultaneously you are beginning your definition of the client system and generating your first impressions leading to a diagnosis. You should be saying to yourself: "Is this a client system which I can help?" and "Do they have a problem that is within my realm of helping?" If the answer comes back "no" with any force, you should know that you may be walking into a trap. It is never a good idea to be committed to a helping relationship in advance.

Wise old hands at change agency consultation may tell you that there are no rules to building relationships. Don't believe them! There are lots of rules. True, there is no one formula that is accepted by everyone, but many of the important do's and don'ts of initial encounters are fairly well understood even if they can't be offered in a mathematical formula.

For the very initial meeting, for example, I would suggest four postures as basic: friendliness, familiarity, rewardingness, and responsiveness. "Friendliness" speaks for itself. The effective change agent comes in with a smile, a handshake, pleasant, warm words and appearances. He also shows himself as a familiar object, someone who is not too different from the people he is trying to help. Saul Alinsky said "If I were organizing an Orthodox Jewish community I would not walk in there eating a ham sandwich unless I wanted to be rejected so I could have an excuse to cop out." "Rewardingness" is another simple principle. The change agent should find some way to be helpful and useful at the earliest opportunity. A small piece of advice or a reference may be enough. Finally, "responsiveness" means primarily being a good listener and showing the client you are a good listener by responding and agreeing where you do agree and sympathizing where you do sympathize.

Good relationships are also reciprocal. They involve openness and give-and-take on both sides, but the change agent must model the behavior he wants to receive. He must create a sense of minimum threat as well as positive expectations of reward which he can live up to. He should also seek to define and structure the relationship and to indicate the limits of his helping skills and capacities.

The most important aspect of the relationship-building process is finding the right people with whom to relate. He should seek to involve all relevant parties in the change, but he first has to ask himself who these relevant parties are. Certainly they should include the opinion leaders, and probably they should include representatives of the formal administrative leadership; but they should also include the persons who feel the need for change the most strongly as well as those who will be most affected by it. These are quite often not the same people at all.

9. How Do You Build A Change Team?

The change agent, however expert and energetic he may be, cannot handle a complex change project by himself and he should not. He should recognize that he will not be there forever and cannot be all things to all people. Thus, he should always be concerned about enlisting the active help of others as co-equal colleagues in the change project.

I have been assuming in the paper that the change agent is an outsider, i.e., not a member of the client system, but someone called in on special and temporary assignment to help on a particular problem. The outsider has certain advantages: he starts fresh; he can have perspective on the problem from an experience with many similar clients; he is independent of the local power structure, rules and regulations, and he has the potential of introducing genuinely new ideas to the system. But he is also a stranger with all that that implies, lacking in detailed knowledge of the client, particularly the unique circumstances

of the client. Thus he can be greatly aided by an inside collaborator, someone who shares his objectives but who also knows the system inside and out, who speaks the local dialect and idiom, figuratively and actually. This insider should also have a modicum of opinion leadership. He should not only understand local norms but he should also share them to some extent, and he should be seen by others as someone identified with the system's needs and aspirations.

All this is said from the outsider's perspective, but it applies equally well if you are an insider seeking to bring about change in your own system. In this case you should be seeking one or more outsiders who can join your team and form an inside-outside link.

Another aspect of team building is division of function. Each change agent will have his own preferred mode of operation and his own role image, but if he is wise he will realize his own limitations and enlist the aid of others who provide complementary skills. In Figure 3, I suggest four possible change agent roles which might be complementary and which are equally necessary in completing a problem solving cycle.

The catalyst is the trouble maker, a change agent who tries to generate a motivation to change by pointing out problems, by confrontation, or by challenge. Such people are sometimes needed to get a system out of a rut, to shake it out of complacency or undeserved self-satisfaction.

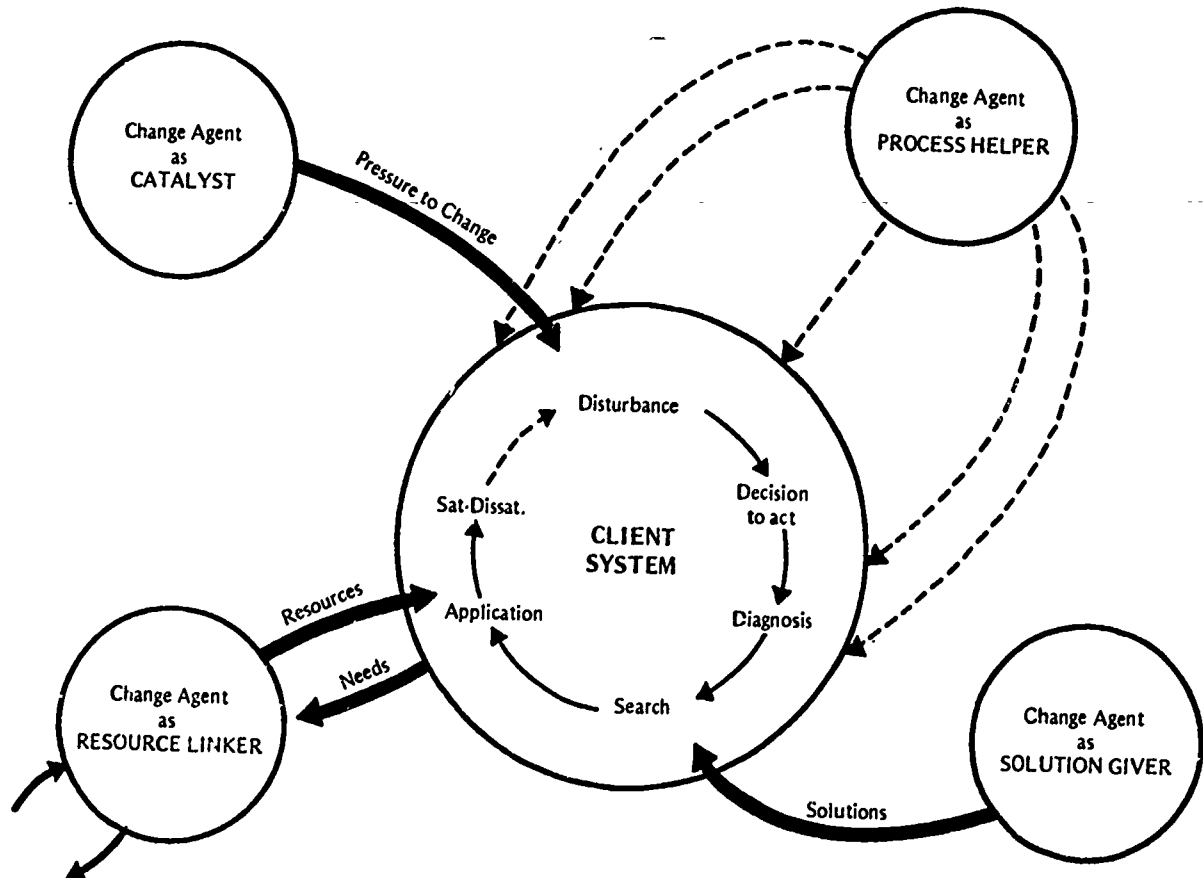
The solution giver is the substantive expert, someone who has facts or materials which may solve problems or be part of a solution. Usually the solution giver operates in only a very small spectrum of resources and he may have a strong basis for one way of solving a problem over another. The process helper, on the other hand, works on a very broad spectrum and provides little or no input on the substance of a problem. He helps the client help himself with improved processes of diagnosis, resource retrieval, application, adaptation, and so forth. Finally, the resource linker also works in a very wide need spectrum but his primary role is to relate the user to the larger resource universe outside himself; this universe will include all sorts of solution givers, process helpers and catalysts. It is, I think, one of the newest models of change agent and one of the most challenging.

No doubt there are a few change agents who can operate in all these roles consecutively or simultaneously, but there must be very few. Thus one way to approach the question of team building is to find people who more or less complete this circle.

10. How Do You Generate A Self-Renewal Capacity in the Client System?

When does a change project come to an end? Perhaps when the problem is solved and the client is satisfied. This is perfectly all right, a

Figure 3
Four Ways to Be A Change Agent



happy ending, but I would urge change agents to stretch their vision a little further. The end product of a change relationship should be a more self-sufficient client who can help himself in the same way as the outside agent had helped him formerly. This is the essence of self-renewal.

The change team is a step in this direction. Inside members of the team will be there after the outsiders are gone, now with some new process skills to work on the next problem or the next layer of problems. This team might become the internal change agency, providing continuing services as consultants to various members of the client system.

Changing the system's attitudes toward change is another important aspect of building for self-renewal. Innovations will often fade and lapse in a few months if the adopting systems fail to accept norms and attitudes supportive of the particular change and supportive of change in general. To engender such attitude shifts it is important to make the positive results of innovating as visible as possible and to provide secondary rewards in praise, financial aid, or recognition to those who took the risk and made the public commitment to the change effort.

Training is another aspect of renewal building. Everything the change agent does he should model for others to follow. If he shares the task of resource retrieval with another person, he will leave behind a new expert in resource retrieval; if he shares the task of evaluation, he will leave behind an evaluator, and so forth. Special training events focussing on various change agency or systems analytic skills and involving many members of the client system might also be appropriate not only for training but also for spreading a consciousness of the value of changing as a continuous process.

Self-renewal also calls for a continuing reassessment both of goals and of means. Thus a project which establishes one goal and one set of procedures, following them through rigidly, sets a poor model for self-renewal. Thus again we see the need to treat the systems analysis tentatively, always ready to recycle, to reexamine our definition of the problem and the client.

Finally, I would stress the need to improve communication and the two-way flow of information within the system, between levels in the system and between the system and the outside. A link once established for one change project can be used again for others, and it builds the capacity of the system to reach out and to reach in to itself for help on sundry problems.

So this is my argument, that a systems approach to changing requires three types of systems analysis, the human system of the client, the sequential problem solving system of the project and finally the system represented by the change agent and client in interaction. I have grouped the main points under ten headings in the hope that they could be remembered a little more easily this way, but this, of course, is arbitrary just as is the frame that we put around a system. Then how do we make use of such a schema? First, I think it can be used as a planning device. You could draw up a simple list of these ten items and ask yourself "What

do I plan to do about this?" and "What do I know about this?" But I would also leave some blank columns to be filled in later as you are getting involved, learning more, and building relationships.

I would then construct a second list to be used at a mid-point in your project where you reassess the entire situation over again, re-examining who your client is and what the problem is. My guess is that both will have shifted at least a bit since the beginning.

It would also be helpful to keep a running log of progress on the ten dimensions as a check on yourself. Review of such a log would help not only in improving this one project but also in sharpening your perception of the change process so that you yourself can be renewed and can approach your next assignment with a little more sophistication. I realize that these suggestions are rather elementary. Perhaps it would be better if I furnished a check list of my own; this I could do. Indeed I have developed one, but it has several hundred items and each item has several columns. It is just too much of a good thing. A change agent who followed my list religiously would find no time for his project! But there is another reason for holding back: it should be your list, adopted to your circumstances and it should not be treated as gospel. Thus, I would urge you to think systems, construct rational, sensible schemas and plans, but to do so with a light touch. Keep your systems open.

A PARADIGM FOR SPECIAL EDUCATION
DIAGNOSTICS: THE COGNITIVE AREA

BY

Mary Meeker

Loyola - Marymount University
Los Angeles

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

BIOGRAPHICAL SKETCH

Mary Meeker earned her Educational Specialist in Child Development, Psychology, at the University of Southern California and is presently Director of Training for Psychologists and Psychometrists, Graduate School of Education at Loyola University of Los Angeles.

Dr. Meeker was a professor at the University of Southern California Psychology Department from 1966-1969 and has been a visiting professor at both the University of British Columbia, and the University of the Pacific. She has been an invited lecturer at the universities and educational centers throughout the nation, and has published extensively for several years

Dr. Meeker and her husband, who is Director of the Computer Center for Social Sciences at UCLA, have three daughters.

AUTHOR'S CONCERNS

Fact Sheet for Developing A New Base for Testing in the Schools

Facts (Based on dissertation findings)

1. No curriculum has ever been based on a theory of how humans learn, nor is education.
2. No IQ test is based on a theory of human intelligence.
3. There are at least 120 separate kinds of intellectual abilities possible; 96 have been identified in adults and at least 56 in children, normal, gifted and retarded as early as age 2.
4. Subject matter curriculum is constantly being upgraded as it changes. To teach a static curriculum does not prepare students for learning.
5. Educational practice must be changed to teach children how to learn.
6. Individual learning styles can be identified in children now but only through individual tests. All children need good diagnosis.
7. The process of learning to read demands 6 intellectual abilities. These are identified. Children deficient in these abilities learn to read if the abilities are taught.
8. Intellectual abilities can be developed if taught.
9. Children with good IQ scores do not succeed in school if they have poor memory abilities. There are 30 kinds of memory abilities testable.
10. Visual memory is related to spelling.
11. Auditory memory is related to arithmetic and music learning.
12. Blind children have difficulty learning figural and relational thinking.

13. Mentally retarded children do not show group intellectual similarities. Many have specific intellectual abilities which are above retarded level. These programs should build these abilities for vocational training.
14. Brain damaged children show several kinds of intellectual deficits and strengths. The strengths can be further enhanced.
15. Poor blacks and poor whites show identical intellectual deficits--these reflect environmental/cultural effects and can be remediated in school planning.
16. Juvenile delinquents show very poor evaluation thinking, poor foresight even though IQ scores are good. Research needs to be done to see whether curriculum to train these intellectual deficits make a difference.
17. Gifted (academically) children differ in intellectual profiles from creatively gifted children. The latter, once identified, can be salvaged. About 1/3 gifted children are also creative.
18. Creative abilities can be developed through curriculum.
19. Mexican-American boys do not show different intellectual abilities from anglo boys.
20. Boys in general show verbal weakness at beginning school. Girls show strengths. Both can be remedied if identified.
21. Canadian Indians show verbal weaknesses which like blacks, whites, and other poor children intensify as they progress through school thus causing failure and dropout. These can be remediated as late as 10th grade if identified.
22. Highly anxious children show poor problem solving intellectual abilities.
23. EMR children who succeed in going out of special classes to regular classes were found in retrospect diagnosis to have had identifiable intellectual strengths.
24. EMR's with IQ's 50-70 were taught special abilities and raised their own IQ scores.
25. Children given memory training in 1st grade made higher reading and attention scores than others and retained their gains over three years.

26. Children taught higher cognitive abilities made whopping scores on creativity tests.
27. Mothers' attitudes affect cognitive styles of young children more than ethnic or class or education factors and their abilities change up or down accordingly.

A PARADIGM FOR SPECIAL EDUCATION

DIAGNOSTICS: THE COGNITIVE AREA

As educational psychology emerged from its parent sciences, psychology and education, a very fine type of twinning* occurred. Educational psychology, as taught in universities, has concerned itself with learning curves, animal responses to stimuli, perceptual data and galvanic skin responses. This is particularly the case when educational psychology has been relegated to the department or school of psychology, neither of which is usually oriented toward the application of psychology to education. Thus, this fairly new soft science, educational psychology, has been added to the curriculum and, consequently, has been and is still being taught from a traditional and therefore, theoretic manner for the most part. This is ironic since the essence of educational psychology, if it has any standing apart from traditional psychology, is that it is an applied science--knowledge applied from psychology for children in an educational system.

School psychology and school psychologists, in particular, primarily are concerned with the application to education of knowledge from the many disciplines within psychology and educational psychology to the learning situation, the learner and the teacher. In the real world of education, however, the curriculum person generally has taken the responsibility for what is taught (content) and since curriculum specialists are concerned with all children, curriculum has been kept in tact as a body of knowledge to be taught somehow to children in special education. Yet special education came into being to answer individual children's needs.

Perhaps the major problem all teachers face is that problem of understanding or attempting to understand individual learners, groups of learners, types of learners, as well as teachers' own reactions to these learners. Where do they go for this understanding? They cannot go to curriculum specialists. I think it is safe to say curriculum specialists and teachers are rarely trained to know the child, his development, his needs, strengths, and weaknesses. It would seem that

*Twinning is a psychiatric term describing the process during or following mitosis wherein the mirrored parts of the body develop.

educational or school psychology should offer the best information available and so most teachers who attempt to learn about these students (those who depart from something called, "the norm") often return to college to study 'exceptional children', a course which is typically concerned with deviant behaviors, learning social and psychological.

But the observant teacher, the sensitive psychologist and the aware parent know that all children differ; not just those earmarked for special education: they differ within the same family, within the same grade level and the same age level; and they do most certainly differ in their learning aptitudes when they show identical IQ scores. They may be average, retarded, gifted, physiologically impaired, disturbed.

Therefore, whether the differences are exceptional ones or not becomes a fine point of debate in the semantics of education. It may be such a fine point that it is best settled by professor-philosophers who are in training institutions and who must determine what the subject matter of any given course is. The teacher, the parent, the school psychologist or anyone who plans for, handles or is responsible for the child must understand each child and the differences within his own parameters, normal or exceptional regardless of what the training institution determines the course matter should be.

There is no system at present which orders these differences found among normal school children--no classification system specifically developed to describe the many characteristics one finds among types of normal children who need individualized attention and curriculum in the schools.

For the severely exceptional child, however, there are several ordering schema^{1,2,3} available for medical diagnosis. One system developed in the United States by the American Medical Association is the Standard Nomenclature.¹ Any system seeks to serve the purpose of encompassing as broad a description about a type of diagnosis as is possible. A less broad system, (for international statistical reporting and study of groups of cases) developed by World Health Organization is called the International Statistical Classification.²

¹Standard Nomenclature of Diseases and Operations, 4th Edition, (Philadelphia: Blakistone Company, 1952).

²Manual of the International Statistical Classification of Diseases, Injuries, and Causes of Death, (Geneva, Switzerland, 1948).

³Committee on Child Psychiatry-Group for the Advancement of Psychiatry, Psychopathological Disorders in Childhood: Theoretical Considerations and a Proposed Classification (New York: Publications Office, Group for the Advancement of Psychiatry, June 1966), Vol. VI, Rep. No. 62.

There has not been a demand for a system of classification specifically oriented for use by school personnel to understand all school children. We can draw this analogy: The medical association saw a need for a standard nomenclature in which medical diagnosis for treatment necessitated a medical etiology describing symphomatology of types of illness. The analogy, for education lies in the fact that if classifications for purposes of instruction continue to be tied to legal and legislated assignment of funds for instruction, and if this national movement toward non-labelling continues, then, educational psychology will also need a classification scheme which is tied to treatment.

Nevertheless, all children in schools whether placed in special education programs or not, do, at times, need some special instruction specifically prescribed for their uniqueness. A portion of this paper describes a model which may be used for development of curriculum to be described in three major areas of growth. Within each of these areas and within the established or expected norms, all students will differ. To the extent that they do, this information needs to be known so that assessment and evaluation procedures can be developed to allow educators to plan instruction for their individual differences.

Such information about any child needs to be assessed by the school psychologist, and communicated to the teacher and the parents who cannot usually gain the information on their own.

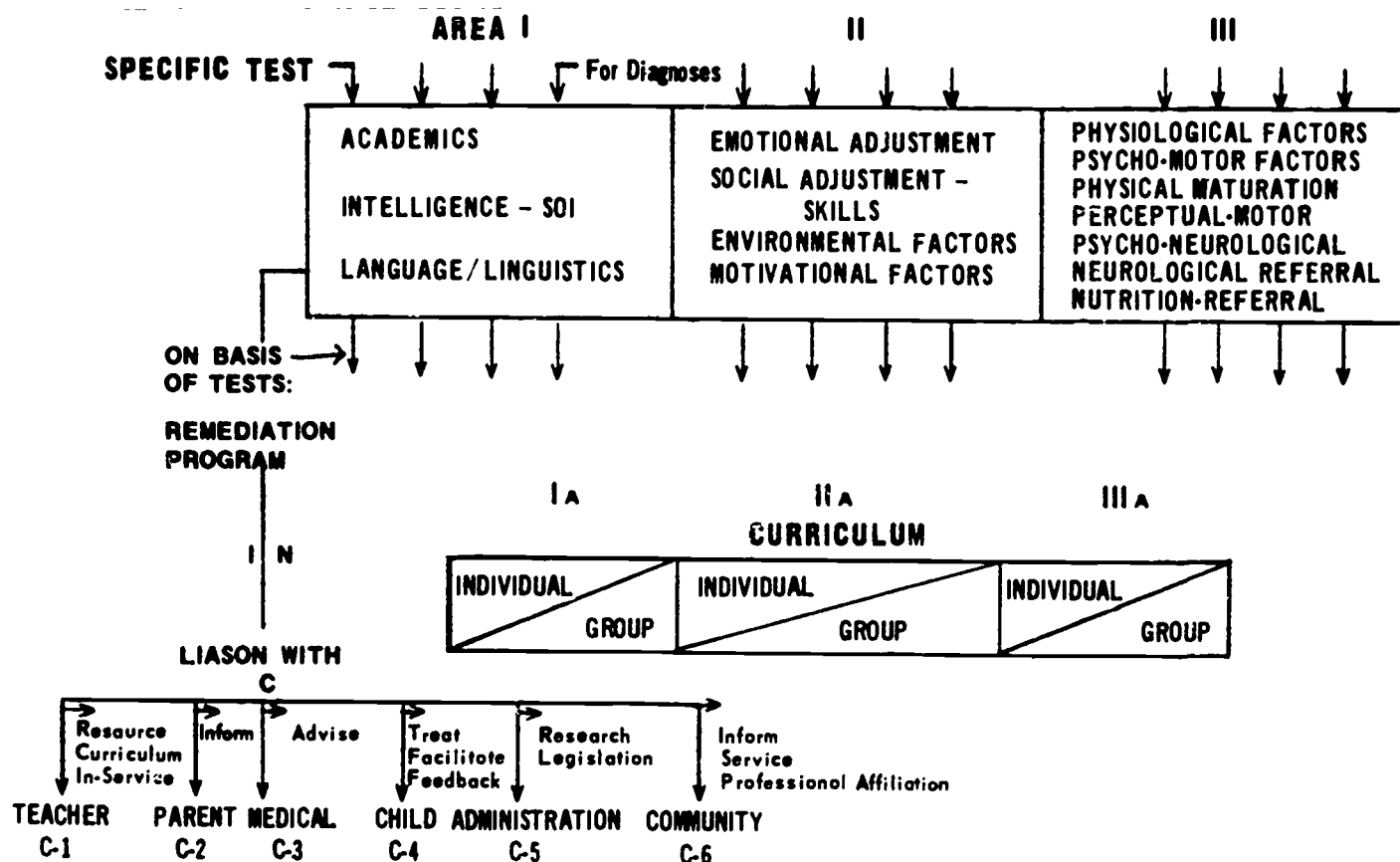
In the course of training school psychologists who for the most part were once teachers and most of whom are also parents, I found it necessary to develop a system for helping psychologists understand the total system or functioning of any one child. We've all learned the concept that the sum of the parts is greater than the whole. Therefore, the components of each of the three parts (areas), if separately tested for, will show that children will differ. See Figure 1-1a.

If we look at the child (or anyone) as a whole person (system) functioning within his or her own capacity, we can diagram the functions by separating them into three major areas. And by doing so, we can chart individual differences. This system will allow labelling or classifying as an educational typology to be replaced by assessment of areas for the purpose of individualized instruction regardless of label or category.

Area 1 functioning, the primary topic of this paper, is defined by intellectual, academic, linguistic and speech differences. Academic functioning is, of course, measured by school achievement--grades and achievement tests. Intellectual functioning characteristics are measured by intelligence tests which differ in terms of the mode of testing (group or individual) and in terms of differential measures (general intelligence or specific intellectual abilities).

Figure 1-1a

PARADIGM FOR TRAINING SCHOOL PSYCHOLOGISTS



OBJECTIVES FOR THE SCHOOL PSYCHOLOGY PROGRAM

1. Expertise in testing for major exceptionalities in 3 areas of functioning.
2. Expertise in development of specific programs to remediate or enhance child's needs in 3 areas.
3. Preparation for liason responsibilities with:
 - a. Teacher
 - b. Parents
 - c. Medical
 - d. Child
 - e. Administration
 - f. Community and Professional Organizations
4. Preparation for director of pupil personnel or special education services.

Research since 1963 which has based academic functioning on intellectual abilities as re-defined by the Guilford Structure of Intellect (SI) model and applied by Meeker (SOI) indicates that academic achievement very often hinges upon the special kinds of intellectual abilities needed for that particular kind of achievement, (Meeker, M. 1963, 1966; Wilson, M. 1969; Feldman, B, 1970 and many others). Thus, Area I functioning in achievement depends a great deal upon intellectual strengths or weaknesses. There are group tests which assess achievement and there are individual tests which give even more precise information. Since the ability to comprehend and use language also underlies the ability to achieve in school, these skills and functioning fall into Area I.

Assessment of these functions in Area I is necessary for systematic planning of individualized or group instruction whether for exceptional or normals who differ. The use of such a model as the paradigm in the training of educators gives to those so trained (1) the ability to perceive where children function differently within the three areas. (2) Delineates tests for specific information; (3) gives the educator a firm basis for true individualized prescriptions.

I shall briefly describe Area II and III functioning before covering the Area I functioning within which the SOI falls.

Area II functioning is often called the affective functioning of the person in contrast with Area I which is referred to as cognitive functioning. But affective functioning is more than single emotional characteristics. In Area II, we see the other components which underlie the affective; that is, the environment (which differs for all children), social skills, social and peer acceptance, personality, character and motivation. There is no mention in Area II of spiritual or moralistic values primarily because this is a paradigm used for training psychologists and parents to understand children based on testing or observational procedures. Yet spiritual and moralistic values belong in, and underlie, Area II functioning. Enlightened interpretation of social adjustment and personality characteristics when tested by means of projective testing can lead to better programs for any child whose Area II functioning needs strengthening. But school psychologists who have learned to interpret projective tests only in terms of dynamic or psychoanalytic theory are often led to make such distorted conclusions that they have earned for themselves the reputation of producing little that is helpful to the teacher or parent. There are other kinds of information forthcoming from testing and observations in Area II and these are used to separate out of the affective area the specifics of what we generally term emotional overlays. The paradigm gives us a clear cut strategy for peeling the overlays. Any program in special education must include remediation based on observations and test interpretation of Area II functioning.

Area III. The physiological factors: Psycho-motor, perceptual-motor, physical maturation, nutrition and neurological variables differ among all of us. Each aspect of functioning in Area III needs to be assessed and acted upon should any differences occur. Therefore, minimally or major brain damaged children or gifted or so called average, or disturbed or poor readers, or whatever label one wants to attach to a student, all need assessment in this area before a program so sophisticated as to include academic material is superimposed on the child. It becomes obvious that a child whose environment is so poor that he is malnourished or lacks nutrition, as well as the child whose body does not assimilate that which it ingests is in just as much need for Area III planning and remediation as the cerebral palsied child who requires special class placement because of an inability to coordinate. Care in Area III is most basic for expected academic achievement. And since it is, teachers, parents and psychologists need to know when to recognize the necessity for a medical or modern nutritional referral before superimposing academic curriculum.

To ask which area is primary or most important is sort of like asking whether the seed, the roots, the stem or the foliage is most important to the plant. Obviously all are important and each important in a different way.

Thus a gifted youngster may need special planning in Area II or III rather than in Area I, as might a retarded or other kind of student. And most certainly, the heavy responsibility and expectations of Area I achievement to the exclusion of all other functions becomes most apparent in its short sightedness.

To clarify how interwoven these functions are and how there is crosscausation and cross-symptomatology, the following game makes clear the interrelationships between any one of the functions in all three areas. See Figure 1-1b.

Area I. The History and Use of the SOI. See Figure 1-1c. The ideas basic to the structure-of-intellect theory were formulated in the late 1950's, and, through the factor analysis of many tests, were successively refined until the present model was formulated. The model is a three-way classification of intellectual abilities designed to encompass and organize intellectual-aptitude factors.

The model attracted much attention in psychology, but perhaps because of its complexity, its use as a practical model was not contemplated. I was a student of Guilford's in 1957 and in conversations with him, I indicated that it seemed to me its greatest utility would not be in psychology but in education, that in education we needed to identify specific learning abilities, but more, we needed to teach them. Guilford smiled and said, "I hope you find a way to use it!"

Figure 1-1b

A GAME: HOW TO FIND THE SUM OF THE PARTS*
(For Parents and Other Educators)

INSTRUCTIONS: On the right side of the page and on the left side of the page, you will find some characteristics. Take each one in turn and ask this question: Does this characteristic affect that one? If you think it does then draw a line with an arrow pointing to the ones it affects. Do this for each characteristic on each side. Begin with the first characteristic at the top of the right column.

PSYCHOMOTOR SKILLS

INTELLECTUAL ABILITY

SOCIAL DIFFERENCES

ENVIRONMENT

EMOTIONAL ADJUSTMENT

MOTIVATION

ACADEMIC ABILITY

NUTRITION

ENERGY LEVEL

PHYSICAL MATURATION

SPIRITUAL VALUES
MORAL VALUES

LANGUAGE FUNCTIONING

*From Meeker, M. Your Gifted Child, Creative or Stressed.
In press.

Figure 1-1b

If the reader has played the game, there are several conclusions to be made:

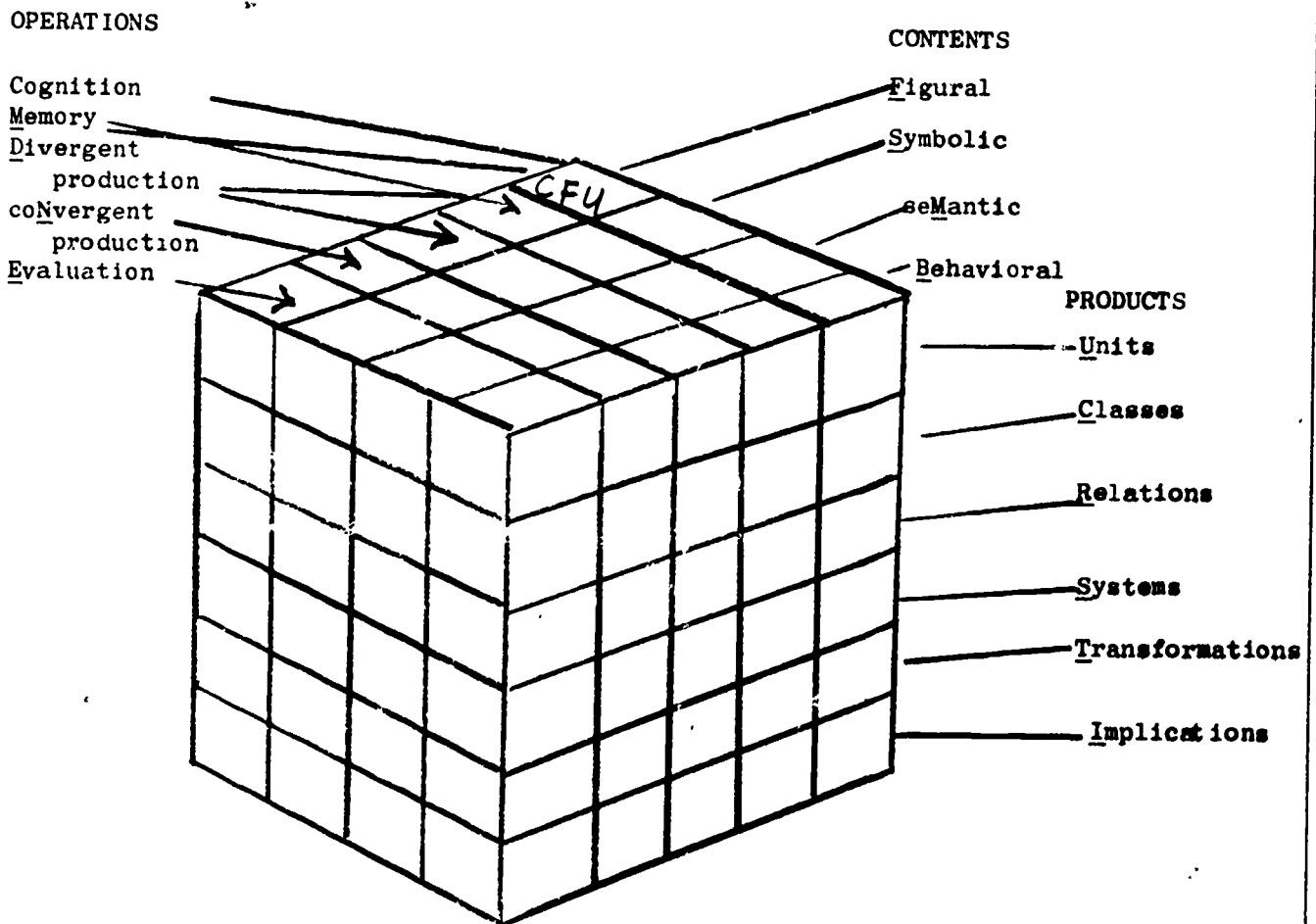
1. A turn of the page so that the top now faces on the left and the drawing of lines between the characteristics appearing at the top of the page will reproduce the paradigm.
2. The inter-relationships are over-whelming.
3. We may speculate that the lines of connections themselves may be capturing the elusive inter-bening variables so long discussed.
4. That the planning for any specific section or function will have much greater effects than are at first apparent.
5. That we most certainly need to be more specific in our diagnosis and remdiation or planning.
6. That we may be doing a great deal more for any child if such a system for testing, diagnosing and planning is used, and targets for curriculum are acted upon.
7. We can understand why children differ so much.

All of us like to know something about ourselves, so in the appendix (see Appendix A) there is a short questionnaire which will give you some indication about your own functioning in the three areas.

Figure 1-1c

Area 1: The History and Use of the SOI

STRUCTURE-OF-INTELLECT FACTORS AND THEIR TESTS, 1966
 Number 36, J. P. Guilford, R. Hoepfner

Review of Research

To my knowledge no theroist had proposed that just as there are emotional overlays there may also be cognitive overlays. Let me explain:

If we assume that the core of cognitive functioning is composed of intellectual abilities and that there are certain specific abilities which are a necessary part of a child's learning repertoire if he is to handle academic subject matter, then certain intellectual abilities must be foundational academia; they form the core around which higher cognitive abilities lay themselves.

We already know that of the 96 Guilford SI abilities found in adults, certain SOI (Meeker's application) abilities have been found to be necessary if learning to read is to occur--(Feldman, 1970, Karadenes, 1971) and that certain intellectual abilities are necessary for Math and English (Meeker, 1966).

My own research began in 1962 when in an attempt to base the Binet and WISC on a theory of intelligence for purposes of curriculum planning, I analyzed items in these tests and assigned them to the Guilford factors. At that time no one had established that these factors also were found in childrens' responses.

With Guilford's encouragement, I developed templates to translate test responses of Binet's to the SI Model, but in order to make these factors known, I had also to find a way to make an SOI Profile. I did this by slicing the cube apart. (Meeker, 1963) See Figure 1-1d.

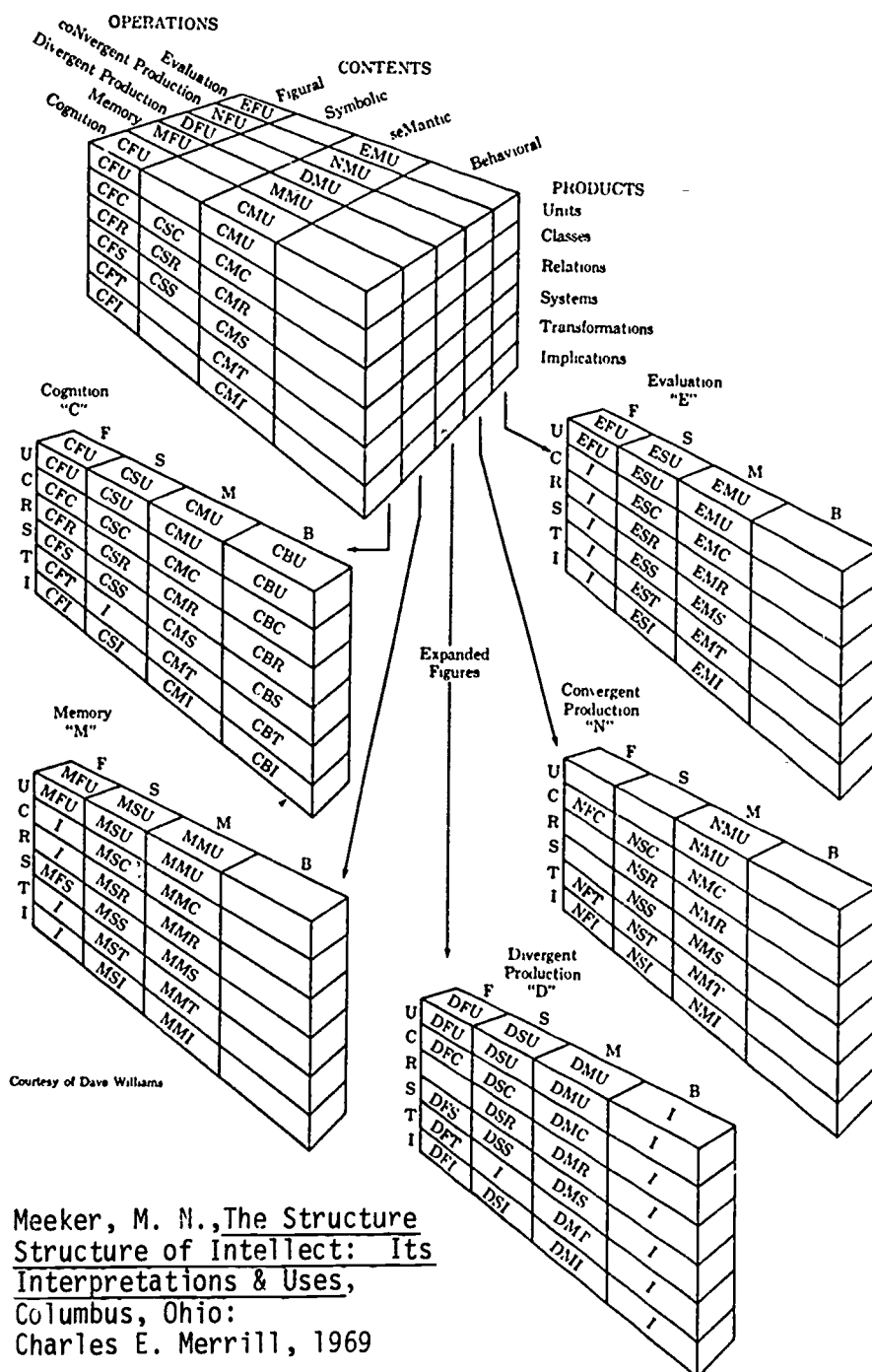
The first public documentation was presented at APA, Philadelphia, 1963. The next formal paper was published in the Journal of Special Education, under the sponsorship of Marcella Bonsall and T. Ernie Newland. Some interest was generated in a few theorists and doctoral candidates, and as a result, these three things occurred: The explosion of a Binet IQ score into components of a theory of intelligence, the suggestion that IQ tests could become diagnostic; and, the assumption that intelligence could be trained.

Charles Silberman in Crisis in the Classroom stated: "The child who is beginning school today will still be in the labor force in the year 2030. We cannot imagine what his work will be, therefore, we must teach him how to learn." Educators began to consider the need to teach more than academic subject matter which is, incidentally, defined as one kind of operation, Convergent Production.

The inadequacy of a general index of intelligence is apparent if no use is made of it other than a number placed in a folder. Nonetheless, instruments of general assessment will not be quickly or easily displaced in the school context for two reasons: First, the instruments are familiar to practitioners and they are, undeniably, statistically sound. Second, there is, at present no practical substitute for the Binet and WISC; i.e., there are no differentiated abilities tests (group or individual) that can be used within the limits of time and personnel that are normally allocated to testing. In other words, general intelligence

Figure 1-1d

STRUCTURE OF INTELLECT



instruments, although inadequate, will find continued use as long as there are no practical specific-abilities tests available, for school students.*

The Binet and the WISC have very limited diagnostic utility when reported as IQ scores and thus have offered little guidance for prescriptive treatment for special education, minority, ethnic, or any other children. As a practical and interim remedy for this situation, the Meeker (1963-1969) method for using Binet (or WISC) responses to derive differentiated assessments of samples of intellectual responses has given us much information regarding individual group intellectual abilities.

The Binet-SOI analysis (Meeker, 1963) was derived for several purposes and is based on several assumptions, chief among which are: That intellectual abilities underlie the learning of subject matter and that with practice, intellectual abilities can be developed just as academic skills can, if a diagnosis of those abilities can be made based upon the rooting of the Binet and WISC on a theory or model of intelligence. The responses from each standardized test would present the most reliable and valid material for the purpose of identifying individual responses. This method has been used extensively in studies by Meeker (1963, 1965, 1966, 1971), Feldman (1970), Brown (1971), Karadenes (1971), Hays & Pereira (1972), and Manning (1973).

Meyers, Dingman and Orpet in 1964 found that certain SI factors were identifiable in young normals and retardates. Orpet and Meyers, in 1966, and Sitkei, 1966 found additional factors in young students. During that time Rachel Ball in an heroic attempt, factored every infant test in existence for use. She and Stott were able to identify many of the SI factors in test responses. This particular work is one of the most definitive of the SI background research, but unfortunately, it is not available except perhaps through Dr. Ball who lives in Tempe, Arizona.

In 1972 Ball continued research on the effect of environment and parent education level on black and white pre-school children. This work was supported by a grant and the earlier reports are not cited here. However, her latest research is summarized as follows:

Ball's research included 1,947 retested five-year-olds and 255 other white five-year-olds. In addition, 211 black five-year-olds were tested, most of them by black examiner. All of the children

*The SOI Institute is now norming group tests for use in predicting whether students have the necessary intellectual abilities for learning reading and arithmetic.

were chosen to conform with the earlier studies by having approximately one-fourth with mothers having graduated from college, one-half with mothers who were high school graduates, and one-fourth with ninth grade education or less. (Ball, R., 1972)

Ball found that when the two groups were combined, the factor analyses yielded two clear factors and two less distinct--Factor 1 is divergent semantic thinking and Factor 2 is convergent figural. Factor 3 is cognitive reasoning and Factor 4 carries a sense of psychomotor involvement.

- * Fifteen percent of the variance in Factor A can be attributed to race, much less with Factor B and reversed with Factor E, so that, in the figural cognitive aptitudes black children outperform white children.
- * The figural Factors B and E are positively related to age.
- * Boys had higher means than girls in Factor A while sex seems unrelated to B and E.
- * Education of the mother is a contributor to all three factors except for Factor E in black children.
- * Age is more effective for spatial abilities than for language.
- * Race is more effective for language based performance than for spatial relations.
- * White children with higher scores seem to have more permissive, concerned homes.
- * Black high performing children seem to have highly structured homes with concerned striving adults.

Of all the tests used and analysed in the study of intellectual functioning of galactosemic children at Children's Hospital, Los Angeles, the most distinct differential findings between treatment groups was found when templates for SOI factors were used. The significance of finding a single instrument for analyzing differences in intellectual functioning cannot be touted too strongly. (Nye, 1973)

Interpretation of findings of her study must be made according to the criterion described and the population from which the sample was selected. A summary of her findings follow: (Graphs are available upon request.)

1. Those children placed on a galactose-free diet at birth (T.G.I) have significantly higher levels of intelligence than children who had the dietary treatment initiated after having ingested galactose for any length of time prior to diagnosis (T.G. II).
2. Those children whose dietary treatment was initiated between three days of life and one month of age have the lowest levels of intellectual functioning as compared to children whose dietary treatment was initiated at birth and to children whose dietary treatment was initiated between one month and eleven months of age.
3. The weakest ability as defined by the SOI factors is Transformations for all galactosemic children regardless of the age when the dietary treatment is initiated.
4. Those children placed on a galactose diet at birth (T.G. I) function significantly better on the factors of implications and Divergent Production than those children who were placed on a galactose diet between three days of life and one month of age (T.G. III).
5. Those children placed on a galactose diet between one and two months of age have the most flat profile of SOI abilities indicating no outstanding strengths or weaknesses.
6. Those children whose dietary treatment was initiated between three days of life and one month of age have the most scattered profile of SOI abilities indicating a widely uneven development of cognitive skills with certain abilities more superior than others.

The above findings are limited to a specific population and to a very specific disorder.

Perhaps the most efficient way to explain the method of curriculum planning from an individual SOI Profile is to do just that.

Let us look at several individual profiles.

Research is now ongoing to chart other known Brain Damaged children, dyslexic and aphasia. Margaret Frankl and I are involved in finishing a book covering the 17 aphasia showing SOI profiles where neurological diagnosis has been confirmed.

Sometimes patterns will show up on the accumulated totals graph and sometimes on the raw profiles, but for classroom purposes the individual profile is the most useful. Workbooks developed for this purpose have been used successfully as have two other teaching strategies we have developed at the SOI Institute. One is an Arithmetic Machine based on Piaget and Guilford Constructs.

Then we have an alphabet kit which through the teaching of CFU, CFC, MFU, MFC, EFU, and EFC develop reading and spelling skills.

One last finding, never published, by Lenore McGuire, Miles Rogers and myself concerned Hays-Binet SOI Patterns on blind-from-birth students. With a range of 56 to over 170, those students at Braille Institute, Los Angeles, with IQ's under 140 showed Figural and relational weaknesses. This was not found in students with scores over 140. However, all showed Memory Strengths.

In conclusion, the paradigm offered here may help us avoid continuation of inadequate diagnosis in the schools.

Let me quote a young physician who chose to become a general practitioner. He said, "What would it be like to be a physician and take care of only those people who have no illness? Ponder this: What the educational system is really doing is culling the scholastic achiever as a rancher culls his cattle. The scholar was probably developed in the first 5 to 6 years of life, therefore, the schools are not contributing to his basic development as an achiever. It requires no real talent to teach students who come to school already endowed with the ability to achieve academic success,--just as any physician can doctor people who are already well. Frankly, our society is not blessed with many teachers who are true mentors, because they are not trained to teach, they are trained to transmit the known." (W. S. Nacol, II, M.D., Seymour, Texas.)

Dr. Nacol's son was an MBD child who, misdiagnosed was a failure in Reading and English but who made A's in calculus and geometry; a perfect SOI profile with failures in the Semantic dimension success in the Figural and Symbolic dimension, but for whom treatment was not forthcoming.

There is no question that reform is needed in education. The best indication that this is so is seen when any system begins to break down.

We need to look at the institution of education from the eyes of current knowledge. We need to select from the theory and technology of today to develop an Ecology for Education.

Thank you.

REFERENCES

- Ball, Rachel, Comparison of Thinking Abilities of Five-year-old White and Black Children in Relation to Certain Environmental Factors, Arizona State University Final Report Project 9-70-0067, May 1972.
- Brown, D. L., Variations in Test Response of Preschool Children by Sex and Socio-economic Level Related to Guilford's Structure of Intellect, Unpublished doctoral dissertation, Univ. of Pittsburgh, 1971.
- Brown, Darrell L., A Study of PreSchool Responses to the Stanford-Binet Scale, doctoral dissertation, University of Pennsylvania, Unpublished.
- Cooper and Whiteed, Psychological Concepts in the Classroom, Harper & Row, 1973.
- Feldman, B., Prediction of First-grade Reading Achievement from Selected Structure of Intellect Factors, Unpublished doctoral dissertation, University of Southern California, 1970.
- Gearheart, B. R., Learning Disabilities Educational Strategies, C. V. Mosby Co., St. Louis, Mo., Appendix B Publishers of Professional Books & Suppliers of Material and Equipment for LD pgs.
- Hays, B. M. & Pereira, E. R., Effect of Visual Memory Training on Reading Ability of Kindergarten and First Grade Children, Journal of Experimental Education, 1972, 41 (1), 33-38.
- Karadenes, M., A Comparison of Differences in Achievement and Learning Abilities between Anglo and Mexican-American children when the two groups are equated by intelligence, Unpublished doctoral dissertation, The University of Virginia, 1971.
- Manning, E., Teaching Divergent Thinking to Gifted Children, Title III Project, Whittier, Calif., East Whittier Schools, 1972.
- Meeker, M., SOI Workbooks: Cognition, Memory, Evaluation, Convergent, Divergent, SOI Institute, 214 Main, El Segundo, Calif., 90245, 4th Edition.
- Meeker, M. N., The NSW Behavior Samplings of the Binet. Paper presented at the meeting of the American Psychological Association, Philadelphia, September, 1963.
- Meeker, M. N., A Procedure for Relating Stanford-Binet Behavior Samplings to Guilford's Structure of the Intellect. Journal of School Psychology, 1965, 3, 26-36.

- Meeker, M., Differential Syndromes of Giftedness, Journal of Special Education, 1963, 2 (2), 185-194.
- Meeker, M. N., The Structure of Intellect: Its Interpretation and Uses, Columbus, Ohio: Charles E. Merrill, 1969.
- Meeker, M., An Evaluation of a High School Educationally Handicapped Class: A Two-year Follow-up of the Measurables and Unmeasurables In Educational Therapy, Seattle: Special Child Publications, 1971.
- Meeker, M., & Meeker, R., Strategies for Assessing Intellectual Patterns in Anglo & Mexican-American Boys Aged 4-5 & 7-9, Journal of School Psychology, Vol. II, No. 4, 1973.
- Meyers, C. E., Dingman, H. G., & Orpet, R. E., Four Ability-factor Hypotheses at Three Preliterate Levels in Normal and Retarded Children. Monograph of the Society for Research in Child Development, 1964, 29, 5.
- NEA-Project LIFE, THINKING ACTIVITIES FILM STRIPS, SOI Based, Dr. Glenn Pfau.
- Nye, M. Lennon, Dietary Treatment and Cognitive Development of Galactosemic Children as Analyzed with the SOI, Unpublished dissertation, USC, 1973.
- Orpet, R. E., & Meyers, C. E., Six Structure-of-Intellect Hypotheses in Six-year-old Children, Journal of Education Psychology, 1966, 57, 341-346.
- Schwartz, G. & Tracy, N., Language-Learning System & Learning Disability, Simon & Schuster, New York, 1970.
- Sitkei, G., Comparative Structure of Intellect in Middle and Lower Class Four-year-old Children in Two Ethnic Groups. Unpublished doctoral dissertation, University of Southern California, 1966.
- Wood, Nancy, Verbal Learning, Dimension Publishing Co., San Rafael, California, 94903.

APPENDIX A

This is how it is with me:

		Never		Sometimes		Always	
		0	1	2	3	4	5
I.	A. I catch on to new things before most people						
	B. I may not integrate it, but I can follow most things I hear or see						
	C. I remember well things I need to know for a few seconds						
	D. I can cram or recall things I need to remember only for a few hours or day						
	E. I can well recall things I studied long ago; most things stay with me						
	F. When I drive I plan ahead						
	G. I am well organized and have better judgment than most people						
	H. I made mostly A's in school						
	I. I can solve problems well if I know the rules or principals involved						
	J. I am creative in decorating and dressing						
	K. I come up with unusual, unique ideas						
	L. I am sensitive to the feelings of others without being told						
	M. I think faster than most						
	N. I talk faster than most						
	O. I see the funny side of things sooner than most						
II.	A. As an adult I have fewer problems than my friends						
	B. I have no resentment about working harder or extra time						

This is how it is with me:

	Never			Sometimes		Always
	0	1	2	3	4	5
C. My home environment is a comfort to me, a haven						
D. My life runs more smoothly than my friends'						
E. I've grown to change my early values						
F. I've overcome many of the worries that bothered me when I was younger						
G. I am able to give in more than most people						
III. A. I have excellent eyesight with correction						
B. I am good with solving problems with my hands						
C. I have excellent hearing						
D. Illness and fatigue characterize me						
E. I have more energy than most people						
F. I prefer sports to other things						

KEY:

Area I or Cognitive Abilities

- A - B indicate Cognition (Comprehension) functioning
- C - E indicate Memory functioning
- F - G indicate Evaluation functioning
- H - I indicate Convergent Production functioning
- J - O indicate Creativity (Divergent Production) functioning

Area II is an approximation of your social, emotional functioning

Area III indicates your general physical handling of the environment

APPENDIX B

COVER SHEET FOR PARIDIGM BASED CASE STUDY

Summary of Tests, Analyses and Remediation or Intervention

Name Grade Age B.D. School Address Phone	Social-Emotion	Tests:
		Remediation, see page
		Tests:
		Remediation, see page
		Tests
		Remediation, see page

APPENDIX C

PRESCRIBED ACTIVITIES FOR COGNITIVE SKILLS

_____ Name _____	_____ Date _____	_____ Grade _____
------------------	------------------	-------------------

PSYCHOMETRIC DATA:

BINET _____	OTHER _____	C.A. _____
-------------	-------------	------------

WISC Verbal _____	Performance _____	Total _____
-------------------	-------------------	-------------

SOI DATA: (From cells in SOI Profile)

WEAK ABILITIES: (Write in cells with minus signs, etc.)

COGNITION:

_____	_____	_____	_____
_____	_____	_____	_____

MEMORY:

_____	_____	_____	_____
_____	_____	_____	_____

EVALUATION:

_____	_____	_____	_____
_____	_____	_____	_____

CONVERGENT PRODUCTION:

_____	_____	_____	_____
_____	_____	_____	_____

DIVERGENT PRODUCTION:

_____	_____	_____	_____
_____	_____	_____	_____

STRONG ABILITIES:

COGNITION: _____

MEMORY: _____

EVALUATION: _____

CONVERGENT PRODUCTION: _____

DIVERGENT PRODUCTION: _____

COMMENTS: Select tasks from the SOI Abilities Workbooks coded to fit the above samples. Administer SOI Pre-tests for in-depth diagnosis.

Attach SOI profile and accumulated totals of operations.

APPENDIX D

DEFINITIONS OF FACTORS COMPOSING THE STRUCTURE OF INTELLECTMAJOR PROCESSES

(Intellectual activities which the individual does with information)

- (C) COGNITION: Discovery, awareness, rediscovery, or recognition of information in various forms; comprehension; understanding
- (M) MEMORY: Retention of information in any form
- (N) CONVERGENT PRODUCTION: Generation of information from given information, where emphasis is upon reproducing conventionally accepted or achieving best outcomes
- (D) DIVERGENT PRODUCTION: Generation of information from given information, where the emphasis is upon variety of output from same source.
(Innovation, originality, unusual synthesis or perspective)
- (E) EVALUATION: Reaching decisions or making judgments concerning the correctness, suitability, adequacy, desirability of information in terms of identity, consistency, and goal satisfaction

CONTENTS

(General varieties of information)

- (F) FIGURAL CONTENT: Information in concrete form, as perceived or as recalled in the form of images; "figural" implies some degree of organization or structuring
- (S) SYMBOLIC CONTENT: Information in the form of signs, having no significance in and of themselves, such as letters, numbers, musical notes
- (M) SEMANTIC CONTENT: Information in the form of meanings to which words commonly become attached, hence most notable in verbal thinking; involved in verbal tests, where things signified by words must be known
- (B) BEHAVIORAL CONTENT: Information essentially nonverbal, involved in human interactions, where awareness of attitudes, needs, desires, intentions, thought, etc., of other persons is important.

APPENDIX D (cont.)

PRODUCTS

(Results from individual's processing of information)

- (U) UNITS: Segregated or circumscribed items of information having "thing" character
- (C) CLASSES: Aggregates of items of information grouped by common properties
- (R) RELATIONS: Recognized connections between units of information based upon variables that apply to them
- (S) SYSTEMS: Organized or structured aggregates of items of information; complexes of interrelated or interacting parts
- (T) TRANSFORMATIONS: Changes in existing or known information or in its use, as in production
- (I) IMPLICATIONS: Extrapolations of information, in the form of expectancies, predictions, antecedents, and consequents

APPENDIX E

GLOSSARY FOR SOI FACTOR DEFINITIONS*COGNITION

- CFU - Ability to identify objects by name, visually and auditorially
- CFC - Classifies perceived objects
- CFR - Ability to discover relations in perceptual material
- CFS - Perceives spatial patterns and maintains orientation
- CFT - Manipulates or transforms objects into another visual arrangement
- CFI - Explores visually ways to select most effective action

- CSC - Discovers complex relationships, patterns, or systems
- CSR - Discovers relations involving letter patterns
- CSS - Ability to discover complex relationships forming patterns or systems

- CMU - Vocabulary
- CMC - Ability to identify classes of words
- CMR - Discovers relations in conceptual, abstract meanings
- CMS - Ability to comprehend or structure problems in order to solve them
- CMT - Sees several meanings to a word or expression
- CMI - Anticipates needs or consequences of a given situation

MEMORY

- MFU - Recalls materials learned by visual and auditory presentation
- MFS - Recalls arrangement of objects previously presented

- MSU - Recalls for immediate production after one presentation of a series of numerals or letters
- MSS - Memory for a system of numerals, symbols or letters
- MSI - Memory for well-practiced number operations

- MMU - Reproduces previously presented ideas or words studied
- MMR - Remembers meaningful pairs of words
- MMS - Remembers order of materials or events presented visually or auditorially

EVALUATION

- EFU - Ability to identify identical forms
- EFR - Ability to evaluate figural relationships
- EFS - Ability to evaluate and decipher systems, beginnings and ends
- EFI - Sensitive to problems, spatial, seeing defects and deficiencies and suggesting improvements

- ESR - Decides which symbol relations are consistent with others in a series

*For use with Binet LM templates

- EMU - Ability to apply varied word meanings
- EMR - Uses logical relationships in testing correctness of conclusion
- EMS - Appraises aspects of common situations in terms of experience
- EMT - Practical judgment about ideas

CONVERGENT PRODUCTION

- NFU - Ability to comprehend and reproduce an observed bit of behavior
- NFC - Ability to sort or classify
- NFR - Ability to deduce figural relationships
- NFS - Reproduces a system of figural design

- NSR - Finds nonverbal response to fulfill a given relationship between numerals or letters

- NFI - Ability to solve simple equations in terms of familiar forms
- NSS - States the order of symbolic systems from start to goal correctly
- NSI - Substitutes or derives symbols as expected

- NMU - Ability to state correct names of concepts and ideas
- NMC - Forms correct groups from a large number of words or objects
- NMR - Ability to correlate semantic representation
- NMS - Arranges objects or events into a meaningful sequence
- NMT - Shifts function of objects or part of something to use in a new way
- NMI - Ability to state the correct deduction from given facts

DIVERGENT PRODUCTION

- DFC - Reclassifies perceived objects in various ways

- DSU - Produces words fulfilling specified structural requirements
- DSR - Generates a variety of relations between numbers or letters
- DSS - Produces symbolic systems in unique ways

- DMU - Ability to call up many ideas in a specified class
- DMR - Produces words from given words as synonyms, or as associated words
- DMS - Analogical completions
- DMT - Ability to produce remotely associated, clever, or uncommon responses
- DMI - Specifies details that develop a scheme or variation of an idea

Divergent production and the transformation and implications dimensions are all indicators of creative potentials. A balance of two or more plusses or minuses is significant for program planning.

APPENDIX F
A PARADIGM FOR AN EDUCATIONAL
THERAPY PLAN

Accountability:

- I. Area I Functioning
 - A. Academic Objectives
 - B. Intellectual Objectives
 - C. Language, Linguistic Objectives
- II. Area II Functioning
 - A. Objectives for Growth in Social Development
 - B. Objectives for Emotional Growth
 - C. Objectives for Environmental Changes
 - D. Objectives for Motivational Needs
- III. Area III Functioning
 - A. Objectives for Physiological Growth
 - 1. Remedial PE
 - 2. Psycho-motor
 - 3. Visual - Perceptual
 - 4. Auditory
 - a. Speech
 - b. Hearing
 - B. Neurological reference: medication___ or Testing___ (check one)
 - C. Nutritional Program
 - 1. Referral Out
 - 2. School lunch or Breakfast program

COGNITIVE TRAINING: A LOOK AT THE PAST
AND SOME CONCERNS ABOUT THE PRESENT

BY

Lester Mann

Montgomery County Intermediate Unit
Blue Bell, Pennsylvania

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

BIOGRAPHICAL SKETCH

Lester Mann, a graduate from the Doctoral programs of the University of North Carolina, is presently Director of Special Education for Intermediate Unit 23, Montgomery County, Pennsylvania, a service unit providing extensive Special Education Services to the handicapped and gifted. His previous experience includes that of Supervisor of Special Education and Supervisor of Special Classes, Director of Child Guidance (all for Montgomery County), and Assistant Director of the Raleigh and Wake County Child Guidance Center.

Mann has been involved in a variety of projects, including his services as Consultant and Advisor to the National Regional Resource Center of Pennsylvania. He is past Project Director of the following projects: Physical Education Specialists as Mental Health Resource Persons (NIMH), of Research and Information Services for Education (RISE), the Eastern Regional Resource Center of Pennsylvania, the Pennsylvania Resource Information for Special Education (PRISE), Clinical Education Services, and of Reorganization of Trainable Curriculum. His most recent research grant, BEH No. OEG-0-70-3557, studied the effectiveness of various types of Physical Education Training approaches with diverse diagnostic categories of emotionally disturbed children. His present research effort concerns the comprehensive assessment of modalities and their implications for education.

Mann presently holds a number of editorial positions, including that of Executive Editor of the Journal of Special Education, and co-editor (with David Sabatino) of the Reviews of Special Education. He is also on the editorial board of Academic Therapy.

Mann has published in a variety of fields. A recent focus is that of process training (under which cognitive training falls) test and criterion referenced measurement; he and his associates have completed a criterion referenced system for use in reading that will be published this fall by Harcourt Brace Jovanovitch. Recent publications include the following: Physical Education Intervention with the Exceptional Child; Advance and Concurrent Organizers for Detailed Verbal Passages used with Elementary School Pupils; Criterion Referenced Measurement: The World of Gray Versus Black and White; Factorial Structure of ITPA; Investigating Aptitude Treatment Interaction: A Focus on the Aptitude Component; Models for Measuring Induced Affective Change: Some Neglected Methodological Considerations.

AUTHOR'S CONCERNS

1. Traditional intellectual assessment is increasingly drawing fire, aided and abetted to some degree by voices within the special education community, who see the tests as being outmoded or discredited instruments of elitism. They also criticize the tests as not providing adequate information for education when, in fact, global "cognitive" tests have a solid history of successful validation behind them and do have implications for education. Special education should resist the jettisoning, or demeaning, of valuable traditional instruments.
2. There has been excessive reliance in special education upon tests which purport to offer psychoeducational assessment in respect to specific "processes," such as the Frostig Tests of Visual Perception and the ITPA. If global intelligence tests can be criticized for weaknesses in predictive and construct validity, the psychoeducational tests seeking to delineate specificities in behavior are considerably more suspect. Their excessive utilization and over interpretation should be resisted.
3. Special Educators sometimes confuse test measures and their names with underlying processes that, in fact, are but usually poorly and, at best, partially identified, so that diagnoses of cognitive difficulties made on their basis may be spurious.
4. It is improper to base education and training programs on test results, unless the tests are definitively correlated with, or mapped onto, the objectives of concrete educational and training programs. Programs of perceptual, language, or cognitive training, based on tests, are suspect, unless the issues of criterion relevancy are clearly resolved.
5. Special educators are too awed by research and theory. Quotes and references to the research and literature and theory are used to justify educational practices that are often only peripherally related to them. It is time to stop quoting the scriptures of research and theories, and the eminents responsible for them, to justify questionable educational practice.

6. Special educators are too prone to accept statistical proof of significance in experimental and correlational studies as bearing upon the validity or lack of validity of the techniques that are employed in special education. Education and training are typically sustained processes, carried out in situ within classroom settings. Generalizations from research laboratory or from correlational studies are not likely to have much importance for classroom practices. Different means of validation must be sought for classroom practices.
7. Special educators should seek non process concepts to orient learning disabilities. Concepts such as intellectual inefficiency, proneness to disruption, and disinhibition may well provide, to be more meaningful, descriptions of mental functioning for special educators, rather than those of presumed processes.
8. Instructional objectives should be established and goals should clearly be established for as many areas as possible in special education. Lack of clearly defined objectives and goals mean that assessment of educational training programs and activities and their necessary improvements cannot be accomplished. Criterion referenced measurement should be used to assess the achievement of these goals.
9. Education of the handicapped should be directed toward functional and utilitarian goals, rather than to the strengthening or remediation of "impaired" abilities which are essentially fictional in status. Effective teaching and training of children in such utilitarian areas may have remedial effects upon underlying disability causes.
10. The fallibility of the diagnostic prescriptive approach should be recognized. It is fallible in terms of the instruments used to assess personological variables, fallible in terms of the known interaction between instructional and personological variables, fallible in terms of our measurement of outcome variables.

COGNITIVE TRAINING: A LOOK AT THE PAST AND SOME CONCERNS ABOUT THE PRESENT

The¹ topic that has been assigned to me is that of cognitive training. That it has been considered of sufficient importance to justify its inclusion in a conference for decision makers, justifies a prediction that I made some several years ago when criticizing the practices of perceptual training.

" 'cognitive skills,' too, are timidly lifting their profiles. (The practicing educator still appears uneasy when he approaches cognitive skills. The author predictsthey will become more popular and as educators and everyone else become bored with 'perception' they will emerge into the fore as a focus for tests and training programs.)" (Mann 1971, a)

Yes, cognitive training is very much a part of the current educational scene; and it is not just limited to training programs specifically intended to train cognitive processes. Many curricular approaches also boast of their potential for developing cognitive skills, or as having been developed on the basis of cognitive principles. It all makes me want to raise the question (in entirely rhetorical fashion), whether we did not always train cognition when we taught children to read and to utilize numbers, to express themselves in composition and to understand and assimilate the knowledge structures of social studies, physics, chemistry, biology, law and the what..... It makes me want to raise the further question as to whether it is of any genuine value to educators to convince them that these or those materials or programs develop judgment, inferencing skills, powers of abstraction and the like; when all we are in fact doing is reifying the various activities and objectives of the materials and programs; or when we cast these reifications into the form of meretricious, if soul satisfying, equations and profiles of cognitive abilities and disabilities.

¹The domain of cognitive training can be extended to include almost every area of behavioral functioning, or restricted as per investigators' particular predilections. It may be conceived separately from perception, or it may subsume it.

Finally it makes me wonder as to the peculiar fascination that the realm of psychic abstractions or constructs holds for special educators, who are largely condemned to labor in the most concrete realms of education. We hear but occasionally of professors of philosophy who talk (at least any more) about training the cognitive processes of their students. But the special educator, whose goals and orientation are typically specific, narrowed, and concretized, is likely to expound to great lengths on the topic. It is true that there has been a general renaissance of interest in cognitive training during the past fifteen years in education, and that preschool, general and higher education as well as special education have participated in it. Nevertheless, no other group has as earnestly dedicated itself to the evaluation and training of inner "processes," or abilities, including those of cognition, as has special education.

There are perhaps a variety of reasons for this state of affairs. In part it is due to special education's unique proximity and proclivity to psychology, which has more significantly affected the evaluation and education approaches it adopts, than those of any other area of education, except perhaps early childhood. In part it is due to the tedium that teaching children with limited potential has engendered; remediating "processes" is more romantic and more satisfying than teaching shoelace tying or handwriting to children whose minimal progress frustrates the best intended teacher. Most damning of all, it is due, perhaps, to special education's inability to show sufficient progress for the time and money spent in more traditional approaches. The wave of disillusionment with traditional special education classes, that we have seen these past few years, is one result of this "insufficient" progress. The "process" orientation, that has been so dominant, is yet another. However, the tide has now turned. The perceptual trainers have had their turn on stage and been found wanting. Those who believed that they could precisely specify language processes with their tests should now know better. While they who engage themselves with "cognitive" processes have not been buffeted about as much (partly because their subject matter is murkier, partly because their claims have usually been less blatant), I predict that their claims, too, will be found deficient. This writer perceives, in fact, a general return in special education, away from the romance of processes and back to concrete and pragmatic issues of training children in areas of utilitarian concern - but more of that later.

By this time it is certainly apparent, as it was apparent earlier to those of you with whom I am more closely acquainted, that one of your speakers on cognitive processes is no great friend of cognitive processes - that is as we have approached them in special education (Mann 1967, 1971 b). Indeed, I have come here today to recommend a farewell to them in your daily educational practices, to be succeeded by a conversion to the gospel of instructional objectives and criterion referenced measurement. However, before making my case against present-day cognitive training,

I believe it would be helpful for all of us to make a historical digression, or perhaps regression to consider some of the historical facets of cognitive training; for cognitive processes and their training have been of enduring interest and concern to philosopher and psychologist and educator over much of recorded history, and I believe that a historical appreciation of cognitive training will assist us in making more tempered judgments of its value for our own day.

HISTORICAL REVIEW

I. The Powers of the Mind!

The beginnings of cognitive training, as do the beginnings of so much else in our present-day world, are to be found with the Greeks. The names of the cognitive structures or abilities that the ancients were concerned with, of course, had somewhat different names or implications then than those we of the present day are accustomed to use, though they have a familiar ring to them in terms of their semantics and implications. Cognitive processes or abilities were conceptualized in the past in terms such as powers, capacities, functions, and, most commonly, as cognitive theory progressed through history, as faculties.

The "faculty" conception was a natural one. If someone or some animal could do something, it must, therefore, have the power or faculty of doing it. Simplistic faculty conceptions were quite common in early Greek philosophical thought (Brett 1912), and Aristotle typically has been granted the privilege or the blame by most texts as being the father of formal faculty (sic process) psychology. However, it seems to have first seriously emerged in Socratic-Platonic thought.

Socratic-Platonic psychology confronted two other major influences, conceptually and instructionally, on the Greek cognitive scene. One was that of the sensationalists, such as Democritus, who held that knowledge was built out of (in poorly defined terms) the experiences, i.e., the sensations, impinging upon the learner. The second force was the practical heuristic position of the Sophists, who proposed to provide the everyday information and knowledge required for successful, practical living - without worrying too much about the moral implications of such teaching. We find Socrates (470-399 B.C.), originally a Sophist himself, eventually concerned about the uncertain information that a sensationalist approach provided, and the amoral quality of instruction offered by the Sophists. There had to be, in his way of thinking (at least in so far as we know of him through Plato), knowledge beyond the here and now... knowledge beyond the uncertainties of sense information and of commonplace practical experience, knowledge reflecting the innate truths, ideas and ideals inherent in man's psyche. Socrates, and Plato introduced, in opposition to direct didactic approaches, the dialectical or conversational method, the objectives of which were to develop minds

capable of reaching correct conclusions and of formulating eternal truths. Its implications were of processes to be developed, rather than information to learned. As was noted by Monroe, "Socrates and Plato were interested in the process as a process, and in the power developed by its use (Monroe p.29)." They were quite clearly cognitive trainers.

Spearman squarely gives Plato (427-347 B.C.) the credit for being the first formalizer of the faculty doctrine (Spearman 1932). Plato did it by breaking up the "mind" into two separate faculties, capacities or powers. First that of Sense, which produces only appearances and cannot be trusted, and that of intellect itself, which affords knowledge of reality and itself is infallible. The choice of subjects, according to Plato, for teaching, was to be on the basis of their contributions to the development of the powers of the mind - specifically that of intellect; geometry was thus a preferred area of study in the mathematical realm, because circle and squares were more graceful and grace inducing than other grubby number areas. Plato also localized different parts of the "soul" in different parts of the body. Intellect he localized in the head, which was the bodily component closest to heaven and particularly graceful because of its spherical shape; he could thus lay claim to being one of the fathers of phrenology. He emphasized mental training through dialectics and a generalized type of curricular training.

Contrary to Plato and Socrates, Aristotle was clearly an empiricist. In his Posterior Analytics he proposed an alternative interpretation of knowledge to that given in the Platonic doctrine of innate ideas.... Learning, Aristotle held, clearly involved the building up of knowledge from experience, rather than the unfolding of universal ideas already present in the mind, such as Plato had suggested. Generalizations (and what we might call abstract ideas), he argued, are not inherent givens, but rather the result of intellectual activities. Even the operations of mathematics and dialectics, the basis of the Platonic method, he noted, depended upon knowledge previously obtained from the experiences in the phenomenal world, rather than from inner "recollection," as Plato would have it. Experience, he proclaimed, was given first in simple primary perceptions, which become woven by the mind into larger supra complexes; and these eventually constituted new knowledge, not of specific particulars but of the universal. In short, the mind generalizes on the basis of its experiences; a cognoscente of cognition - certainly our Aristotle.

In his Posterior Analytics, Aristotle discussed the development of generalizations - sought after in the pursuit of knowledge (Bowen 1972); e.g., the sequences of demonstration, assertion and definition required to achieve them. All of this, of course, is in the realm of "cognitive" processes and their training. Aristotle, it should be noted, like Plato, seems to have maintained a perception - "higher cognitive process" distinction, as is the wont of theorists in our own

era. Perception was a lower power, he noted, a "congenital discriminative capacity"... "Clearly a property of all animals. They have an innate faculty of discrimination, which we call sense-perception." Knowledge sprang, as Aristotle saw it, out of sense data, through its organization, by cognitive operations, into patterns of higher complexity.

Aristotle also divided the soul into nutritive, appetitive and intellectual divisions, each with various faculties or powers.... and he recommended the training of these powers or faculties, and their part functions. His position on this training, however, is incomplete. In his Politics he emphasized that there should be three periods of training, emphasizing bodily, impulsive and intellectual development (with the training of the processes, rather than the content of instruction being important). Unfortunately, after his recommendations for the first two periods, i.e., for the training of body and impulses, his treatise breaks off before it proceeds to cognitive training; this account has apparently been lost!

It is not completely clear whether Aristotle conceived of the various abilities, powers, or faculties as being separate and distinct, nor whether some processes that he discussed were major processes in their own right or merely sub-expressions of other processes. The great philosopher-scientist either did not feel compelled to fully extend and explicate all of his conceptualizations, or, perhaps, the repeated translations of his work that have resulted in ambiguities regarding his position.

Aristotle's powerful voice went into rapid decline following his death. In the Roman and early Christian era and the dark ages, it was Plato who spoke. The Arabs finally recovered Aristotelian thinking for Western Europe; translations of their translations brought Aristotle back into European thought. And it was the mediaeval church fathers, e.g., Albertus Magnus (1206-1280) and St. Thomas Aquinas (1225-1274), who fastened him onto Western European thinking in ways that are still influential - and who anchored the conception of faculties firmly in the psychological-educational thinking of the centuries to come.

The faculty concept through Platonic periods and Aristotelian periods, through the Dark and Middle Ages, and into the Renaissance and beyond, was to endure, prosper and influence educational practice. To the original faculties of Sense and Intellect that Plato suggested, others were added. Some considered Memory a faculty - though Aristotle didn't appear to have given it pure and clear independent status. To this triad others added imagination or invention. The four originally seemed to provide, as Spearman noted (1932), a "seemingly exhaustive account of cognition." They neatly supplemented each other.... And they seemed to fit reasonably well the ventricular attempts at localization that such eminents as Nemesis provided (4th century A.D.). However, the list of faculties varied with the theorists who proclaimed

them, much as the case with the cognitive "processes" of today. The faculties of speech and that of attention, both came in vogue before the fall of the Roman empire. And the faculty of movement (Barsch and Kephart being anticipated) was emphasized by both Aristotle and Mediaeval Scholastics, though for a long time afterward movement as a process failed to attract much interest.

These seven, sense, intellect, memory, imagination, movement, speech, and attention, were the basic ones; the magnificent seven of faculty psychology. Increases in the number of faculties over the years were usually accomplished by subdividing them. Sense was broken down into as many different mental powers as there are different sense organs. Intellect was analyzed into the three faculties of cognition, judgment and reasoning. Memory was split into reproductive and reconstructive faculties.¹

It is interesting to note from our standpoint the conceptualizations of cognitive abilities and disabilities, that many of the faculties or powers conceived of by original thinkers were on an all or none basis... The idea of lesser or greater degree of cognitive powers - this standpoint was alien to earlier thinkers²... The exception is that of memory, which from the very beginning was a focal concern of all cognitive theorists. Plato noted that some people have "naturally good memory," implying varying amounts. And Aristotle went a little further.

"Neither very quick-witted nor very slow people seem to have good memories; in the one class there is too much fluidity, in the other too much density...Dwarfs and those who have a greater development in the upper parts of the body have poorer memories than those of the opposite type, because they have too great weight pressing upon the organ of consciousness... Children are dwarf-like in type."

In any case, the conceptualization of faculties as explaining individual differences appears to have derived from laymen, not from the philosopher-psychologists of the day, and lay faculty language made it clear that, yes, for the man in the street, different people had differences in endowment, in global intelligence, and in specific faculties such as imagination. And, eventually, the popular conception

¹There were also growing lists of affective and cognitive faculties, but these do not concern us here.

²Quintilliam appears to be a notable exception; nor is it to say that other early writers did not recognize individual differences - they simply left them out or diminished their importance in their writings on faculties.

of faculties as differing in amount, affected the philosophical psychological theorists of the day. By the time of Christian Wolfe, one of the men most famed (*Psychologia Empirica* 1732) as a faculty psychologist, intelligence was explicitly defined in terms of grades varying from person to person, as was imagination and memory, the power of sensory discrimination, etc.

Throughout history, both before and after Wolfe's exposition of faculty concepts, there were voices raised against it - many because it appeared to violate the concept of the unitary soul. Descartes was one of the prominent protesting voices:

"There are in us as many faculties as there are truths to be known..But I do not think that any useful application can be made of this way of thinking; and it seems to me rather more likely to be mischievous, by giving to the ignorant occasion for imagining an equal number of little entities in the soul."

It would take more than criticism from even such a dominating figure as was Descartes to slow the march of faculty psychology with its multiple power or ability structures and even those who attacked the concept were not fully able to divest their thinking from its influence. The use of faculties to explain cognitive operations, indeed most behavior, was clearly necessary, as Reid (1710-1792) pointed out!

"The words power and faculty, which are often used in speaking of the mind, need little explication. Every operation supposes a power in the being that operates; for to suppose anything to operate, which has no power to operate, is manifestly absurd."

Thus even John Locke, who in his emphasis upon the tabula rasa and the sensory nature of knowledge attempted to counter the conception of innate faculties, himself inevitably succumbed to the position he struggled against, as we shall see. And through the centuries there was a long parade of eminents, who in one way or another contributed to or supported the stance of faculty psychology... Among the ranks of French psychologists we find Mallebranche, Condillac, de Tracy and Bonet. Among the Germans we find Wolfe, Kant and Gall. And in the British Isles we find Stewart, Reid, Hamilton and Spencer. It is Immanuel Kant, Thomas Reid and Franz Joseph Gall, who most command our attention for the now; Kant (1724-1804), because his acceptance of Wolfe's faculty position strongly influenced the psychologies of subsequent generations (the chapters of the typical psychology textbook were, and often still are, testimonies to Kant's faculty conceptions). Reid (1710-1796), because he established one of the "definitive" and widely accepted (during the 19th century) listings of faculties; i.e., 24 "active powers" of the mind, and Gall, because he empiricized faculties.

Franz Joseph Gall (1758-1828) was, of course, the modern father of phrenology, the doctrine that different psychological faculties are

located in specific parts of the brain and that their strength and weaknesses can be judged by the size and location of protrusions on the skull. Evaluating phrenology, Boring (1950) has noted "it is almost correct to say that scientific psychology was born of phrenology, out of wedlock with science." And it is also almost correct to say that Gall is the early major progenitor of the learning disability movement. Actually Gall was a great deal more subtle than a rough reading of his position would indicate. And it is important to note that he attempted to make faculties a subject for empirical study. While his methods of validation were tainted by biases and atrociously incorrect, they still were attempts at validation as contrasted to other faculty positions which simply generated "faculties" as hypothetical givens requiring no empirical substantiations. Gall was also the father of modern brain localization theory which, when it finally did determine that there were specific portions of the brain associated with various "powers" of faculties, called itself the "new phrenology." Gall was scientifically demolished by French experimental physiologist Flourens (1794-1867). History has judged Gall more kindly than did his contemporaries and Flourens somewhat less kindly. Both remain major figures historically, not just in their faculty-localization controversies, but in respect to the issues of experimental versus clinical observation and the part-whole controversy. Flourens' sarcastic dismissal of the faculty position is worth repeating before we move on, and I would like to echo it, if I may.¹

"but what sort of philosophy is that, that thinks to explain a fact by a word? You observe such or such a penchant in an animal, such or such a taste or talent in a man; presto, a particular faculty is produced for each one of these peculiarities, and you suppose the whole matter to be settled. You deceive yourself; your faculty is only a word - it is the name of the fact - and all the difficulty remains just where it was before."

It would take more than Flourens to destroy the appeal of phrenology to scientific and popular minds, and phrenology survived almost to the middle of the twentieth century. Under the guiding hands of various popularizers such as Spurzheim in Europe and the Fowler brothers and Coombe in this country. It promised scientific improvements of man, and it had particular appeal to education. Faults in pupils were simply due to undeveloped faculties which were diagnosed by skull depressions. Famous educators such as Barnard, Mann, and even the redoubtful Howe swore by the doctrine and guided their educational practices by it... the fervor of current Frostig and ITPA enthusiasts simply does not

¹The reader, for a more topical appreciation of this statement may wish to substitute the word process for that of faculty.

compare with the assuredness of nineteenth century psychoeducational practitioners who knew that they could assess abilities and disabilities via head proportions and remediate accordingly!

In any case, it is safe to say that faculty psychology, in the variety of its forms, dominated educational theory and practice throughout much of educational history. Vives, Comenius, Pestalozzi, Froebel, Rousseau, and, yes, Itard, Sequin and Montessori, all adapted faculty positions; some less severe or more adulterated than others.

A mighty blow from Herbart, the famed philosopher-psychologist-educator (1776-1841), brought faculty psychology to its knees. Herbart perceived the various faculties as simply being emergents of ideas and their interplay, rather than as existing distinct separate entities in their own right. Thus he noted that, while there is "willing" there is "no such thing as an independent faculty of will" (we might say similarly here that there are acts of cognition but not cognitive powers or abilities). Herbart denied faculties to assert the unity of the soul and its functioning. He also denied the separability of functions for separate training, since all mental functions cooperate together in various tasks. Herbart's enormous prestige did much to discredit faculty psychology which was dealt further blows by James and Thorndike and Woodworth (these we shall consider when we review mental discipline).

But faculty psychology lived on nonetheless. It was supported by the development of mental measurement toward the close of the twentieth century. As Galton noted, "one of the most important objects of measurement... is to obtain a general knowledge of the capacities of man by sinking shafts, as it were, at a few critical points..." And Alfred Binet, despite his fame as the creator of a global intelligence test, was really a faculty psychologist and the man who, I believe, should be credited with the tradition of evaluating or defining processes through psychometric testing. His work was carried on by a variety of other psychologists and educators, who in essence created the beginnings of the diagnostic prescriptive training movement that is presently so fulgent in special education; these psychometric pioneers continued and expanded the traditions of faculty psychology, through they were now often talking about abilities, capacities, or powers, or aptitudes, or traits, rather than "faculties." Further developments of the testing movement also spawned factor analysis which when used otherwise than descriptively is a variant of faculty psychology.

And, of course, faculty psychology lived and lives on in the hearts and minds of all who believe that they could or can train affective, cognitive, perceptual, or other processes.

Yes, attacked by Descartes and Flourens and Herbart, discredited by experiment, derided by the behaviorists, ignored by learning theorists,

the conception of mind as divisible into separate powers is hard to vanquish. Why? Let us listen to Spearman, who summed up his case against the faculty conceptions as follows:

"Summing up, the "oligarchic" doctrine, which takes ability to fall into some few great faculties each functioning in a unitary manner; which would claim to measure each faculty by a single value; which puts together a set of such measurements into the so-called mental "profiles;" which on the strength of these would dispose of the fate of thousands of persons - this doctrine would seem on closer scrutiny to be wholly devoid of foundation."

But!

"one curious feature about these formal faculties has yet to be mentioned. The doctrine loses every battle - so to speak - but always wins the war. It will bend to the slightest breath of criticism; but not the most violent storm can break it. The attacks made long ago by the Herbartians appeared to be irresistible: no serious defense was even attempted. Yet the sole permanent effect of these attacks was only to banish the word "faculty," leaving the doctrine represented by this word to escape scot free. As much may be said the onslaught of Thorndike. His audience easily agreed with him - and thereafter went on making just the same unwarranted assumptions as before."

The explanation for the enduring nature of faculty psychology, broadly speaking, would appear to be simply that faculty and process conceptions are easy, natural, and "obvious" ways of explaining events and individual differences, and of establishing causes. As Reid said "... to suppose anything to operate, which has no power to operate, is manifestly absurd." The proclivity of people, including modern day special educators, to cling to faculty conceptions or those of process, is also a consequence, as I have noted elsewhere, of man's archetypical need to reify (Mann 1971 b). Verbs, adjectives, and adverbs become nouns, and nouns become transformed into realities. And then what a person does is identified with the power or faculty of doing it. From this it is but a short step to the training of this power or faculty - cognitive training, for example!

II. The Training of the "Powers of the Mind"

In attempting to organize and rationalize my attack (and it is an attack) upon the issues of cognitive training, I attempted a rough taxonomical assessment of current cognitive conceptualizations and cognitive theorists, as respects their relationship to cognitive training.

Let me first of all acknowledge the vast variety of commendable efforts made by those who would use "cognitive" principles in the shaping

of curricula; or in managing the organization, pacing and presentation of information and materials in the instructional process, or in their conceptualizations of where and how education goes where it goes. That is in so far as we recognize the fallible and tenuous nature of all concepts, including their cognitive ones. Under this rubric I would place such as Gagne, Suppes, Bruner, and Ausubel. Their activities and concepts have been used to shape instructional processes and, in some cases, directly shape curriculum. Shall we call such cognitive theorists cognitive trainers? Not in a sense, I believe, that we are considering the topic here today; especially since the processes they have conceptualized are oriented to or can be oriented to and anchored in instructional procedures. Their "cognitive processes" may be considered, perhaps, as being "soft" process variables as opposed to the "hard" processes that we encounter in efforts to isolate and directly train cognitive processes.

Where does Piaget fit? He is certainly a "process" advocate. There have been cognitively based curricula and instructional practices proffered by some of his followers, so that, yes, we might place him in this first grouping. There have also been Piagetian based efforts to directly train cognitive processes in children such as those involved in conservation; but these seem generally free of the faculty taint, which I am particularly concerned with in this paper. Piaget, himself, seems to have avoided the "poison pawn" position of glibly offering educational solutions based on his theories. Perhaps we just ought to categorize Piaget as Piaget, so as to recognize his towering position among cognitive theorists.

Where do we put the cognitive stylists, those of the leveling-sharpening hypothesis, the impulsivity-reflectivity dimension, etc.; some of their "dimensional processes" are presumably trainable. Some would fit in with the afore discussed group of cognitive theorists; some might easily find a home with those who directly espouse cognitive training.

And then what about Aptitude Treatment Interaction (ATI) which, of course, is an approach to the study of the adjustment of education and training as per specific traits and characteristics of learners; and to stretch it further, an attempt to find specific ways of training and educating that are more suitable for particular learners' individual propensities. While ATI is not fully in the ballpark of process or specific ability training, i.e., cognitive training, it is associated with the doctrine of processes. Many present-day diagnostic-prescriptive techniques can be conceptualized as clinical ATI approaches. We will not pursue ATI any further in this paper. The examiner has discussed it elsewhere (Mann & Goodman 1974). There is also Ysseldyke's excellent review in the First Review of Special Education (1973).

Finally we come to a consideration of those individuals who directly advocate the training of cognitive processes.¹ And I might take this moment in the manuscript to note, while the tenor of this paper to the present point has been to consider cognitive training as related to specific processes, that, of course, cognitive training can also be carried out on the basis of global concepts.² Attempts to raise "I.Q." through training and education represent "global cognitive approaches." A variety of preschool and early school intervention techniques and approaches can be considered as global cognitive training efforts, including many under the "Headstart" rubric. Meeker, of course, falls largely in the specificity camp. An assuming consensus of opinion about language involving cognitive operations, so does Kirk and those others who recommend training along ITPA lines. Our arguments, in this paper, are directed in the main against those who profess the training of specific process, but they hold, to a considerable degree, for the "global" trainers as well.

Let us now attempt to historically sketch some process training efforts of the past. We may roughly divide such efforts into those of mental discipline, which generally encompass broad efforts to utilize curricula to train or improve mental processes, and those efforts which are directed specifically to the training of various processes, which we will categorize here for purposes of exposition as direct cognitive training; this is the approach that we in special education are more familiarly acquainted with... In truth, both mental discipline and direct training approaches are but different coins of the same currency. Both are logical extensions of the doctrine of faculty psychology, have similar purposes, and overlap of methodologies.

Mental Discipline:³

The desirability of developing positive, general, intellectual traits or cognitive powers, as opposed to mere specific content areas e.g., in curricula, has been a popular notion from Plato to Bloom.

¹ It is important, of course, for us to distinguish between those who see education and training as generally improving performances which may be classified as cognitive (that includes me, too!), and those who espouse direct training of cognitive skills which are conceptualized as cognitive processes - as is the popular position in today's Special Education.

² Intelligence, as Spearman would tell you, is an arch process.

³ In the past, also known as formal discipline.

And this was in essence what the doctrine of mental discipline proclaimed and sought to accomplish. But let us hear from Thorndike (1912).

"As an aim, mental discipline is best used to mean the increase of a person's general powers to respond well in thought and action and feeling. It is thus contrasted with particular knowledge, particular powers, particular skill, particular desires and aversions, and the like. If we contrast a general faculty of reasoning with particular powers of inference about geometrical facts or linguistic facts or botanical facts - if we contrast a general power to attend with particular habits of attention to books, classroom instruction or professional tasks - we may call the improvement of the former in each case a gain in general mental discipline and the latter a gain in special habits. Other things being equal, the former will obviously be better worth aiming at than the latter."

And let us hear what some of the educational textbooks of Thorndike's time told their readers about the possibilities of mental discipline.

"The pursuit of mathematics gives command of the attention ... The man or woman who has been drilled by means of mathematics is the better able to select from a number of possible lines which may be suggested that which is easiest or most direct to attain a desired end. The second purpose of this study is... the strengthening and training of the reasoning powers."

"By means of experimental and observational work in science ... his attention will be excited, the power of observation ... much strengthened, and the senses exercised and disciplined."

"Correct use of the foreign language... makes concentration imperative and serves in an eminent degree as a discipline of the will... Practice in the use of a foreign language cultivates the imagination."

"The capability of concentrating attention on a certain point in question, in whatever field it is acquired, will show itself efficacious in all fields."

"Will-power and attention are educated by physical training. When developed by any special act, they are developed for all acts."

"Let us now examine in detail the advantages... a person... derived from the study of classics. Aside from the discipline

of the will, which comes from any hard work, we find the following: (1) His memory for facts has been strengthened by committing paradigms and learning a new vocabulary. (2) He has been obliged to formulate pretty distinctly a regular system of classified facts - the facts which form the material of the grammar - classified in due form under chapter, section, subsection and so on. This means that he has learned to remember things by their relations - a power which can hardly be acquired without practice informing or using such classified systems. (3) He has had his judgment broadened and strengthened by constant calls upon it to account for things which cannot be accounted for without its exercise."

"The visual mental and manual powers are cultivated in combination, the eye being trained to see clearly and judge accurately, the mind to think, and the hand to record the appearance of the object seen, or the conceptions formed in the mind. Facility and skill in handicraft, and delicacy of manipulation, all depend largely upon the extent to which this hand and eye training has been fostered. The inventive and imaginative faculties are stimulated and exercised in design, and the graphic memory is strengthened by practice in memory drawing. The aesthetic judgment is brought into use, the power of discerning beauty, congruity, proportion, symmetry, is made stronger; and the love of the beautiful, inherent more or less in mankind, is greatly increased."

And let us "hear" from the cognitive-motivational impulse behind "modern" mental discipline practices, as pronounced by J. B. Wickersham, State Superintendent of Public Instruction of Pennsylvania, during late nineteenth century.

"No means are known whereby the faculties of the mind can be developed but by exercising them. By the potent spell of the magic word Exercise, is evoked all human power. The proof of this proposition is found in multitudes of facts. The senses grow more acute by using them. The memory is improved by remembering, the reason by reasoning, the imagination by imagining. All these powers, too, become weak if not used. These facts may be learned from each person's own experience, or from observation upon others. The law inferred from them is fixed and universal."

Now to a chronology of events: It will be remembered that the Greeks, i.e., Plato and Aristotle, subscribed to the belief that instruction was intended to develop body, mind and moral character above and beyond, and in preference to, its practical training implications or specific contents.

The Romans, while "recognizing" the efficacy of study in the values of education along formal discipline lines, were essentially concerned with the practical issues of education, and did not subscribe to the mental discipline doctrine as vehemently as did their Hellenic predecessors. Nonetheless, Quintillian, the most famous and influential of Roman educators, urged upon his readers the cognitive training values of specific curricular pursuits. Geometry, he argued, for example, exercised the intelligence, sharpened the wits and improved quickness of perception. It also provided training in deductive reasoning.

The "disciplinary" value of education was generally subscribed to throughout the early Christian era and Middle Ages, since first Platonic and then Aristotelian precepts dominated these periods. It was a natural position, considering the preeminence of faculty concepts in those days. As Europe moved through the Middle Ages into the Renaissance, we find Erasmus and Vives holding to positions of mental and spiritual discipline through study. Vives, as we shall later see, also urged direct process training.

The position that education had as its goal cognitive training was clearly promulgated by the sixteenth century by Richard Mulcaster (1531-1611). "The end of education and training," he noted, "is to help nature to her perfection, which is, when all her abilities are perfected in their habit." To be considered in this training are the three main powers of the mind... "Wit to take (or perception), memory to keep, and discretion to discern (or judgment)."

It was John Locke (1632-1704), however, who firmly ensconced the concept of mental training in the philosophy and practices of education. One would not have expected that the famed proponent of experiential learning would be concerned with the training of the mind's inherent powers... but Locke was not at all consistent with himself. In any case, the doctrine of innate faculties obviously influenced him as is manifest from these statements:

"We are born with faculties and powers capable of almost anything," he wrote, "such at least as would carry us farther than can easily be imagined; but it is only the exercise of those powers which gives us ability and skill in anything."

"As it is in the body, so it is in the mind; practice makes it what it is, and most even of those excellences which are looked on as natural endowments will be found, when examined into more narrowly, to be the product of exercise, and to be raised to that pitch only by repeated actions. Few men are from their youth accustomed to strict reasoning, and to trace the dependence of any truth in a long train of consequences to its remote principles and to

observe its connection; and he that by frequent practice has not been used to this employment of his understanding, it is no more wonder that he should not, when he is grown into years, be able to bring his mind to it, than that he should not be able on a sudden to grave and design, dance on the ropes, or write a good hand, who has never practiced either of them."

"Would you have a man reason well, you must use him to it betimes, exercise his mind in observing the connection of ideas and following them in train. Nothing does this better than mathematics, which, therefore, I think should be taught all those who have the time and opportunity, not so much to make them mathematicians as to make them reasonable creatures... that having got the way of reasoning, which that study necessarily brings the mind to, they might be able to transfer it to other parts of knowledge as they shall have occasion."

Locke advised the teaching of a wide range of sciences, not for the sake of the realistic knowledge obtained, but for intellectual discipline, "to accustom our minds to all sorts of ideas and the proper ways of examining their habitudes and relations;... not to make them perfect in any one of the sciences, but so to open and dispose their minds as may best make them capable of any, when they shall apply themselves to it." Similarly, he suggested that reading was a means of training cognitive discrimination. "Those who have got this faculty, one may say, have got the true key of books, and the clue to lead them through the mize-maze of variety of opinions and authors to truth and certainty."

Some apologists for Locke and his "discipline" theory note that he hedged his bets about training processes, and it is true that he did issue disclaimers. Thus he conceded that, "learning pages of Latin by heart, no more fits the memory for retention of anything else, than the graving of one sentence in lead makes it the more capable of retaining firmly any other characters." And while advancing the position that the method of reasoning in mathematics can be transferred "to other parts of knowledge," he also demurred that "men who are reasonable in some things are often very unreasonable in others," and "men who may reason well in one sort of matters today may not do so at all a year hence." Similarly, he stated that the generalized benefits that students might obtain from mathematics are simply because it "would show them the necessity there is, in reasoning, to separate all distinct ideas, and see the habitudes that all those concerned in the present inquiry have to one another, and to lay by those which relate not to the proposition in hand and wholly to leave them out of the reckoning..." - a reasonable and modest enough conclusion.

Disclaimers or not, the doctrine of mental discipline, subsequent to Locke's espousment of it, became the "law of the land" in academia, where it reigned and reigned for many years, supported by the increasing dominance of faculty psychology in Europe. And as a consequence the training of cognitive powers became a self manifest expectancy in the camps of both psychology and education. The doctrine of mental discipline held a dominant place until diminished by Herbart, by William James' laboratory studies, and the more definitive research on transfer of training of Thorndike and Woodworth. These latter two, hacking away at its empirical support, took away its scientific credibility. However, the doctrine never lacked for supporters and lived on. Thus, in the post World War II years, we find Adler and Hutchins, two popularly prominent educators, supporting both faculty psychology and mental discipline. While Hiram (1957), in his studies on the transfer value of studying logic, concluded that upper grade pupils can be taught to think logically through a course of logic, a reasonable, if tautological conclusion; and Skelton (1957), in reviewing High School Foreign Language Study and Freshman Performance, concluded that the study of foreign language in high school made for better academic achievement in college.

Yes, mental discipline lived on and lives on... in Bloom's taxonomy ... in the claims of ever so many modern-day curricula... in the work of many cognitive theorists... and, of course, in cognitive training. Before leaving it, let me just note that the doctrine of mental discipline certainly makes sense, both as respects the transfer of specific elements and in regard to the transfer of general cognitive habits and traits, if we don't belabor it, and, unfortunately, it has been belabored. I even like the idea, and the mental discipline philosophy is the one that I would recommend to you if, despite my Savonarola preachings, you insist upon pursuing cognitive training. For, if visual perceptual training will improve the reading process, the converse is equally true, that improving reading will also improve perception. And, if memory training will improve one's ability to remember his lines in a school play, learning one's lines in a school play will improve his memory, and if gross motor training will improve one's functioning in the kick-ball game, then, etc., etc.

Direct Cognitive Training:

The beginning of the educational practices directed specifically and directly to the training of cognitive functions are not so clearly discernible - certainly not with the Greeks. The Roman pedagogues appear to have gone the road of individual differences in education by observing and responding to the specific propensities and weaknesses of their pupils and recommending techniques to ameliorate, strengthen and control them. But direct cognitive training procedures do not appear to have been carried out. Vives, that great psychologist-educator, speaking at the close of the Middle Ages, however, would seem to fall directly into

the category of being a process or ability trainer. While he endorsed the views of mental discipline through curricular training, he also concerned himself with a more direct focus upon process training (1531). He notes...¹ "let memory be exercised at an early age, it improves with practice."

The great Comenius (1592) also noted that "what must be done must be learned by activity... Let the students learn to write by writing, to talk by talking, to sing by singing, and (in the cognitive training tradition) to reason by reasoning."

It is to the great special educators that we owe the most vivid and lasting efforts at direct process or ability training. The term mental discipline is one that is typically associated with general education and with training of "normal" processes. Efforts at direct training or remediation of impaired, debilitated, or weak and undeveloped processes, while they proceeded on the basis of faculty psychology, do not appear to have been guided avowedly by Locke's tenets. However, they are part of the same movement that Locke identified and credited with the dignity of his name.

The names of these early pioneers in the education of the mentally handicapped were clearly identified with a faculty position. Thus we find this quote by Itard:

"I forced the attention to fix itself on them, the judgment to compare them, and the memory to retain them. Thus nothing was immaterial in these exercises. Everything penetrated to the mind. Everything put the faculties of the intelligence into play and prepared them for the great work of the communication of ideas."

And Seguin emphasized that "each sense must be taught as a function, and taught besides as a faculty..."

Montessori, Decroly, Jescoedres, all held formally or informally to a faculty psychology and process training position. However, there were different degrees of purity in their faculty positions. Itard amalgamated his with the sensationalist concepts he inherited from Locke and Rousseau. Seguin, despite a faculty orientation, seems to have kept his eye firmly on utilitarian, pragmatic goals. Montessori seems to have

¹The writer is very unsure of the validity of his distinctions between mental discipline and direct cognitive training, especially in respect to earlier practices and practitioners - but offers them nonetheless.

less critically accepted the classical faculty conceptions of her time. All were committed to the remediation of deficits, as well as the development of potentials. Their work is clearly salient from this standpoint.

Psychological assessment, as we have noted earlier, provided a modern basis for faculty psychology. It also created a whole new set of rationales, clearly empirical and manifestly scientific upon which to base process training. Binet clearly believed in it, though he has not received his proper place in the Pantheon of learning disability pioneers - despite credits by Frostig and Kirk. Binet was also clearly in the camp of psychologists who believed in the modifiability of intelligence, disputing those who considered it as fixed, inviolable, and immutable. He saw his test as identifying those who could be helped by training, and proposed training approaches for specific processes, e.g., memory! His procedures are, upon reading, engagingly naive.

Binet, as we have earlier described, established the tradition of using psychometric means to assess disability areas and to establish needed areas for training. In his footsteps followed a variety of others during the first half of this century. The most impressive were, perhaps, Bronner (1917) and Burt (1937), both of whom called for the use of specific psychometric "ability" measures, as opposed to global intelligence test ones, for the purpose of determining disabilities and planning remediation programs. For those of you who have test profile withdrawal symptoms, Baker's work, prodromal of the Detroit test (1929), should provide welcome relief.

If such pioneer contributions to the learning disability movement, have not been given their full due, neither has Thurstone's work on Primary Mental Abilities, which so vehemently supported the position of separate abilities. Nor that of his wife, Gwen Thurstone, who was responsible for one of the earliest post-war efforts of education with the culturally deprived. Yes, Ms. Doctor Thurstone taught to the test (PMA) in her programs of cognitive intervention, as Anastasia critically emphasized, but her's was a landmark effort nonetheless.

The post war history on process assessment and training is well known. Thus Strauss, Kephart, Wepman, Kirk, Frostig, Meeker, Myklebust - the list is long - are all part of the cognitive revolution of the post World War II years, which brings us to the final piece of our historical considerations, that of cognitive psychology, the theoretical, empirical and experimental underpinnings of cognitive training.

III. The Current Scene

There is no doubt that the interest in cognitive processes labeled as cognitive processes, has mushroomed over the past fifteen years.

Interest in cognitive processes, under different names however, as we have seen, is almost synonymous with man himself. It is interest in how man knows and functions, and this has always been of concern to him. It is true that psychology lost its "Mind" for a historical moment, because of the behaviorist movement and its anti mentalistic bent during the early part of the twentieth century; when the emphasis in psychology shifted to behavior as opposed to what caused that behavior.¹ And that the early learning and conditioning researchers did not have any great need for hypothetical constructs, but cognition hung on the sidelines during the thirties, supported by such as Heidbreder and Lewin, and in efforts directed toward problem solving, "thinking" concept formation, and the like. The struggle between the forces of the arch behaviorists, Hull, and the cognitive behaviorists such as Tolman in the forties, saw even Hull forced to develop constructs to account for cognition, efforts which Staats and Kendler, among others, have more recently sophisticated. The expansion of interest in "cognition" in the 50's and 60's, was partly sparked by the increasing respectability of "hypothetical" constructs in academic and experimental psychology, by the trait and inner process emphases of the clinical psychologists and personality theorists, by increasing evidence of modifiability of intellectual functioning through training (indeed of actual brain tissue changes), and by advances in and sophistication of factor analysis.

The past decades, of course, have seen educational psychologists and educators develop increasing interest in the hypothetical structures that support knowing, and this, often, in the context of school learning - Bruner, Ausubel, Gagne among them. And then the Kirks, Kepharts, and Frostigs wondered why children did not respond to instruction as per expectancies - and moved to answer their own questions; cognition became a major topic in remedial and special education.

Now for the immediate present. It is perhaps time for us to develop a definition of what cognition is before we go any further; and a very good one is at hand, courtesy of Kagan and Kogan.

".... cognition stands for those hypothetical psychological processes invoked to explain overt verbal and motor behavior as well as certain physiological reactions. Cognitive process is a superordinate term subsuming the more familiar titles of imagery, perception, free association, thought, mediation, proliferation of hypotheses, reasoning, reflection, and problem solving. All verbal behavior must be a product of

¹"The mere mention of the word 'mentalism,' notes Bowers, "offends the sensibilities of a behaviorist in much the same way the word masturbation offends polite company (1973, p. 316)."

cognitive processes, as are dreams and intelligence test performances. But skeletal muscle movements of visceral reactions are not necessarily linked to cognition (1975, p. 1275)."

Kagan-Kogan also distinguish between concepts of cognition as product and process; for purposes of this papers, which is concerned with cognitive training, it is the process that we are after. It is also apparent that the term process can be translated into or defined as being the act of carrying out a particular behavior defined as cognitive, e.g., conservation, or as a presumed inner structure or entity that underlies, creates, generates, or otherwise, is responsible for the behaviors that we consider cognitive, i.e., one of Guilford's SI components (we have not separated the two in our considerations). In any case it is obvious from the Kagan-Kogan definition that almost every form of human behavior we might conceive of, with the exception of those relegated to the lowest of visceral, sensory-motor and reflex levels, can be considered cognitive... What does that mean for cognitive trainers if they wish to direct themselves to the training of specific cognitive trainers if they wish to direct themselves to the training of specific cognitive processes? A herculean, unaccomplishable set of tasks, if not narrowed down.

But, of course, they would want to narrow down their cognitive training objectives - to those most pertinent to behavior of school aged children. Would this help? But then we are faced with the question as to which cognitive processes are the important ones! What shall we choose to train?

Let us look at a list of cognitive areas that Ulric Neisser, a well-known cognitive psychologist is concerned with (1967). Here are some of his categories, supra and sub. In the visual area: transient iconic memory, verbal coding, perceptual set, span of apprehension, displacement and rotation in pattern recognition, backward masking, template matching, decision time, visual search, feature analysis, focal attention, pre-attentive control figural synthesis, search, analysis by synthesis, figural synthesis, perceptual defense. In the auditory area: segmentation, echoic memory, filtering, auditory synthesis, recoding, slotting, decay, linguistics, Gestalts, and grammatical structure. A challenging number, and we have not even reviewed Neisser's "higher" cognitive processes, nor, of course, processes offered us by the more popular educational cognitive theorists and researchers and trainers in education, e.g., Bruner, Gagne, Guildord; or those invented by our own group of special educators, or generated by new doctoral topics which, God bless them, continue to add to our already generous supply of cognitive ability and disability constructs.

Which ones are relevant - how should you choose? Do you use the ones at hand, the neatly packaged cognitive processes offered by the

test makers - or do you roll your own? And what about relevance? Many cognitive processes are relevant. However, when we say that they are relevant, it is simply to say that they bear on a subject, not that they are useful... And their utility is in doubt in special education - from a number of standpoints.

Firstly, it will be remembered that our definition of cognitive processes borrowed from Kagan and Kogan states that "cognition stands for... hypothetical processes." Cognition, its variations and its sub-parts is a hypothetical domain based on inference and delineated as per the operations and the verbal definitions of its researchers, test makers and theorists. There are as many subdomains of cognition as there are areas of interests and labels for them. These subdomains have no reality of their own - beyond their operational confines - the experimental means used to establish them, or observation and "named" - not discovered by some research Balboa. They are arbitrary; they are contrived and the internal states of the organism that they represent, we may be sure, are only partially, imperfectly and inadequately represented by the results of the research and the names assigned to them. Let us listen to warning given by Brigham some 44 year ago:

"Most psychologist working in the test field have been guilty of a naming fallacy which easily enables them to slide mysteriously from the score in the test to the hypothetical faculty suggested by the name given to the test. Thus, they speak of... perception, memory, intelligence, and the like, while the reference is to a certain objective test situation (1930, p. 159-160)."

and from Ebel in 1974:

"Part of the difficulty with the term higher mental processes is in seeing the difference between higher and lower mental processes. Is recall a lower mental process? When I leave the office and try to recall where my car was parked the last time I left it, in Lot D, H, M, or P, and where in the lot, it seems that I am using about all the mental processes, high and low, that I possess. Further, because we do not really know what a mental process is, may it not be premature to try to differentiate higher and lower mental processes?" (p. 487)

At this point my concern over cognitive processes and their training is certainly apparent... There are too many of them - whatever they are, and we are not sure what they are, and we are not sure which ones may be meaningful in education and special education... surely some grounds for concern when we consider training them.

But let us continue, ignoring my doubts for the moment, and focus upon relating presumptive cognitive processes, whose training would be meaningful to the behaviors we are most concerned with in special education; these are certainly functional goals. They include teaching children to dress, read, carry on behavior appropriately in society and perform effectively in work situations and to enjoy themselves. Related to such goals, and their associated subgoals, we may "find" a variety of so-called cognitive behaviors, for, again taking the Kagan-Kogan definition, cognitive processes are everywhere involved. But how do we know which ones deserve training? Usually such decisioning is based on research (and the imprimatur of the .05 level) as to the cognitive processes which are significantly related to the various issues germane to the training of handicapped children. I will not digress to rail upon the triviality that most such research substantiation represents in respect of the broad issues of education and training. I will instead recall the repeated admonitions that we all have received in our training and remind you that even the "validated" relationship of this-or that cognitive variable to the educational and training concerns of special education, this does not establish its causative relationship to them.¹ We, of course, all know that relationships and cause and effect are something altogether different... and that the relationships we find between particular cognitive constructs and the behaviors we are assigned to improve in special education, often serve only, as Ebel says, "to dispose of the question 'why?' without providing any real answer to it. Appearances and beliefs dominate rational thinking here as elsewhere - and resist cognitive retraining.

Then, even if we may assume genuine cause and affect relationships as per certain cognitive variables and the performances we seek to have our children accomplish in special education, questions such as the following arise: How much variance assigned to a "meaningful" mental process must there be before "training" the process will be of value? How do we know the amount or degree of training that will create optimal benefits; there can presumably be overtraining with detrimental effects? How many other important cognitive processes are we overlooking for training because of our focus on a selected few? These are but a few of the many questions we might ask of our hypothetical construct - if they weren't hypothetical!

Let me address myself to the pressing question of all, the one to which a comprehensively positive answer might override all our doubts

¹Blurton-Jones reminds us that an "experiment merely chooses between two hypotheses, it does not prove the correctness of either or exclude many of the other possible hypotheses that it was not specifically designed to test. Nor does an experiment determine whether the tested effects play an important role in the occurrence of the phenomenon during real life." (1972, p. 11)

and negations about cognitive training. Does it work? But, of course, it works, if you mean can we show successes for cognitive training intervention. For, yes, almost every intervention approach has its successes... and cognitive training approaches are likely to positively affect some of the behaviors relevant to the training and education of the handicapped - and of the gifted... There is some transfer of training! There are good general habits that can be trained under one condition, e.g., ones defined by cognitive constructs, that will bear fruit in others, and there are specific skills that we can train under one rubric, which will emerge under others. But let us not fool ourselves that we have trained some processes, or strengthened them or remediated them, to accomplish our successes, when in fact we have simply been training an individual to do things in one situation that has similarities to another that will improve his performance in the other. And I would promulgate here the cliché that we would have been better off training directly for and in the other in the first place, if the improvement in functioning there was the eventual aim of our training. Let me reinforce also what I said earlier: if training "cognitive processes" will improve academics, training in academic (in the broad sense) will improve cognitive processes. And the goals and academics (in the broad sense) will improve cognitive processes. And the goals and objectives of academics are far more visible and valid than those of cognitive skills and strategies in education and notes in a statement I would like to call to your attention.

"There is an effort to separate the process of thinking from the content of the thoughts and to give priority to the process over the content in specifying the objectives of education. It seems to me that such separation is impossible. As I consider what goes on in schools and colleges, I find few instances in which processes of thinking are taught separately from the content to be thought about. Reviewing my own education, it seems that I always learned process and content together; in reading, arithmetic and grammar; in Latin, geometry, and physics; in measurement, statistics, and philosophy. That is why in my own teaching I do not try mainly to develop abstract cognitive skills in my students, or to cultivate abstract higher mental processes. Instead I try to help them build solid, comprehensive structures of knowledge. Of course, these structures include knowing how to do, as well as knowing what is so. But the emphasis is squarely on knowing." (1974, p. 487)

Continuing... Ebel notes that there may be a question whether "structure of knowledge" is not as much a hypothetical type of construct as are "higher cognitive processes." He answers:

"Indeed it is, but it differs significantly from the others in this important respect: it is more clearly and specifically definable than they usually have been. Further, and partly as a consequence of this, it is more accessible to investigation. While a person's structure of knowledge cannot be observed directly, it is not difficult to obtain reasonably meaningful and consistent reports from him on what it includes. This is what we ordinarily do when we give him a test. The sentences in this article constitute a public report of some of the elements in the author's structure of knowledge. That they may also reflect "higher mental processes" or "cognitive skills" is a matter of much more tenuous conjecture." (1974, p. 487-488)

Let me paraphrase what I said about perception some years ago (1970), substituting the word cognition for perception:

"Cognition, like taxes, has always been with us; just as Moliere's *Bourgeois Gentilhomme* discovered in respect to prose, it is something that we have been doing all our lives."

Indeed, cognition is inevitably associated with and engaged in almost everything we do. We do not need to isolate it or its hypothetical components to train "it," if we wish to conceive it as an "it." And, since it is ubiquitously and inextricably engaged in almost everything we do, if we train people to function more effectively in walking, talking, solving school problems or job performances, we inevitably train cognition.

This raises a final question as to the value of various cognitive theories not directly involved in the cognitive training controversy, for education and special education, such as those of Bruner.... etc. Most of their "useful" contribution can be translated into concrete instructional terms. When Bruner talks of proceeding from the enactive representation to ikonic representation and finally to symbolic representation, he is talking about "mental processes" that can be translated into instructional processes, and whose utility to education and training can be directly evaluated. So, in so far as the cognitive processes may be directly translatable into instructional processes, they justify their tempered welcome into special education. However, we should remember that such translations so far have not proven overwhelmingly successful. The most successful has come from Skinner, and, as we know, his is a non-theory theoretical stance dealing with observables and eschewing hypothetical cognitive constructs. While task analysis, instructional objectives, mastery learning, and criterion referenced measurement, which I recommend to you as desirable non "process" approaches, have "cognitive" inheritances and components, all can make their contributions without relying upon cognitive inferences.

All can be applied directly and without a "process" aura, to the goals of special education, i.e., which are directed toward optimizing the performance of impaired individuals in areas of utilitarian concern: dressing, social behavior, reading and arithmetic, and the pleasurable involvements of leisure activities.

Have we made a comprehensive effort at achieving such goals? I do not think so. In fact, the current disillusionment with much of traditional special education speaks to this point! - as does our process orientation. I submit to you that it is time for such a comprehensive effort sans cognitive training, one utilizing curricular approaches. And I submit to you (one additional submission) that our current digression into cognitive processes, and the peculiar fervor with which we have turned to their training, will be looked upon some day as an historical incident - of cognitive slippage.

Conclusions

Let me conclude. Cognitive training represents a commitment to insecurely identified, unverifiable, hypothetical constructs, and too many at that. Cognitive constructs do not represent legitimate processes for training; except in the broadest construction of the term. Cognitive theory and research do have much to say about the ways in which we learn, some of it potentially useful, and much of it useless. The test of such theory and research is not through in-out experiments or correlational studies, but in how they assist in positively modifying the instructional process, in helping determine the types of individual dispositions that contribute to readiness or lend themselves to particular types of instruction (ATI), or the degree to which they provide insight into curriculum¹ and techniques of instruction and suggest means of altering them in positive fashion. Cognitive theory, in so far as it can translate into instructional practices, may be useful, but I do not see the utility of training hypothetical constructs. To reiterate, cognition is part and parcel of almost everything we do... In so far as we do things better, we are functioning better cognitively - whatever functioning cognitively may mean... We don't need to train cognitive processes directly to train cognition... In special education we train cognition best through training toward utilitarian goals.

Let us change our cognitive appreciation of cognition, since it and its subparts hypothetical, based on inferences, created through fallible experiment and uncertain testing procedures, named according

¹The definition of curriculum that I like is that of Keislar and Shulman (1966): "the organization and sequence of a subject, methods of teaching, and the activities of the learner are intricately inter-related to form a single entity" (p. 190).

to the whim of the investigator, and identifying the behaviors which they identify (at best) in tenuous fashion. While we can still draw upon cognition for instructional hypotheses, we should not overvalue what "it" has to offer us for practical educational applications. And as for training cognitive processes, I would like to recall some remarks of Thorndike, who in 1948, following his review in 1948 of "abilities" proffered by Thurstone and Hotelling,

"I do not require them..... partly because I do not believe the mind is composed of such and partly because in any case there are more urgent needs."

The urgent needs that Thorndike was referring to were those relating to success in life.... reading, writing and shoe lace tying. They are, also, presumably the ones that special education is expected to meet.... On the bright Sunday morning of this presentation.... may I say, "AMEN."

Epilogue

To qualify the writer's essentially negative position anent cognitive training, I would like to append the following:

- 1. There are obviously individual differences and some "things" (sic processes) causing them. These are obviously legitimate areas for research; it is their value in educational training that is disputed in the present paper.
- 2. There are broad ability areas that can be legitimately discriminated, e.g., Verbal and Performance Skills on the WISC, that have some relevance for education; the rule is that the more specific "process" under question, the more difficult to relate it to practical issues and problems, and the practical is what special education is all about.
- 3. It is not so much that the writer disbelieves a process orientation which has popularized perceptual training based on naive conceptions, banal efforts, to train the language dimensions of the ITPA, and so forth.
- 4. If process variables eventually prove to be useful in a substantive fashion, the writer predicts it will be through ATI or through various types of behavioral and instructional prostheses - not through direct remedial cognitive training; the latter may be useful in so far as it is used to assist in the training of some specific behaviors which transfer over to the areas of academic and behavioral achievement that we are directly concerned with in special education - in which case we are better off firstly training in those areas.

5. By an excessive "process" orientation, special education has neglected other more useful tools that it has available to it; I have discussed but several....

6. To those readers or listeners whose positions I have offended, I wish to note that my attacks are meant ad verbum rather than ad hominem. I am, for one, a great admirer of Alfred Binet and, for two, of Samuel Kirk, despite my disagreement with the directions some of their work took or takes. In any case - mental discipline anyone?

REFERENCES

- Baker, H. J. Educational disability and case studies in remedial teaching. Bloomington, Ill.: Public School Publishing Co., 1929.
- Binet, A. Les idees modernes sur les enfants. Paris: Flammarion, 1973.
- Blurton-Jones, N. Characteristics of ethological studies of human behavior. In N. Blurton-Jones (Ed.), Ethological studies of child behavior. Cambridge: Cambridge University Press, 1972.
- Boring, E. G. A history of experimental psychology. (2nd ed.) New York: Appleton-Century-Crofts, 1957.
- Bowen, J. A history of Western education, Vol. 1. The ancient world: Orient and Mediterranean, 2000 B.C. - A.D. 1054. New York: St. Martin's Press, 1972.
- Bowers, K. S. Situationism in psychology: An analysis and a critique. Psychological Review, 1973, 80, 307-333.
- Brett, G. S. A history of psychology, Vol. 1, Ancient and patristic. London: George Allen, 1912.
- Brigham, C. C. Intelligence tests of immigrant groups. Psychological Review, 1930, 37, 158-165.
- Bronner, A. F. The psychology of special abilities and disabilities. Boston: Little Brown, 1917.
- Burt, C. The backward child. New York: D. Appleton Century, 1937.
- Ebel, R. L. And still the dryads linger. American Psychologist, 1974, 29, 485-492.
- Hynam, G. H. An experiment in developing critical thinking in children. Journal of Experimental Education, 1957, 26, 125-132.
- Kagan, J., & Kogan, N. Individual variation in cognitive processes. In P. H. Mussen (Ed.), Carmichael's manual of child psychology. (3rd ed.), New York: John Wiley & Sons, 1970. Pp. 1273-1353.
- Keislar, E. R., & Shulman, L. S. The problem of discovery: Conference in retrospect. In L. S. Shulman & E. R. Keislar (Eds.), Learning by discovery: A critical appraisal. Chicago: Rand McNally, 1966.

- Mann, L. Perceptual training: Misdirections and redirections. American Journal of Orthopsychiatry, 1970, 40, 30-38.
- Mann, L. Perceptual training revisited: The training of nothing at all. Rehabilitation Literature, 1971 a, 32, 322-327, 335.
- Mann, L. The ground game in special education. Journal of Special Education, 1971 b, 5, 53-68.
- Mann, L., & Phillips, W. A. Fractional practices in special education: A critique. Exceptional Children, 1967, 33, 311-317.
- Mann, L., & Goodman, L. Perceptual training: A critical retrospect. Paper presented at the First International Leo Kanner Colloquium on Child Development, Deviations and Treatment, Chapel Hill, N. C., November 1973, in press.
- Monroe, W. S. Comenius and the beginnings of educational reform. New York: Arno Press, 1971.
- Neisser, U. Cognitive psychology. New York: Appleton-Century-Crofts, 1967.
- Skelton, R. G. High school foreign language study and freshman performance. School and Society, 1957, 85, 203-205.
- Spearman, C. The abilities of man. New York: Macmillan, 1927.
- Thorndike, E. L. Education: A first book. New York: Macmillan, 1912.
- Vives, J. L. Vives on education. Totowa, N. J.: Rowman & Littlefield, 1971.
- Ysseldyke, J. E. Diagnostic-prescriptive teaching: The search for aptitude-treatment interactions. In L. Mann & D. A. Sabatino (Eds.), The First Review of Special Education, Philadelphia, Pa.: JSE Press, 1973.

CONCEPTS RELATED TO DIAGNOSIS OF EMOTIONAL IMPAIRMENT

BY

William C. Morse, Ph.D.

University of Michigan
Ann Arbor, Michigan

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

BIOGRAPHICAL SKETCH

William C. Morse earned his Ph.D. in Education Psychology (1947) from the University of Michigan, and is professor of Educational Psychology and Psychology at that institution. He is chairman of the interdepartmental Combined Program in Education and Psychology. Major teaching areas: mental health and affective growth, the education of disturbed children. He serves as consultant to special education programs - public school and institutional. Publications include several books, research monographs and articles.

AUTHOR'S CONCERNS

Suggested Questions and Issues for Discussion

1. Consider a very disturbed child you have known well. In what manner was his behavior "abnormal"? In what aspects was he normal? What explanations were given for his behavior?
2. If a program placed a limit of two hours to collect information on a "disturbed" youngster, what would be your list, in order of priority, of information you would request? What would be your rationale for requesting each of the items?
3. What is the actual diagnostic processes for disturbed children now being advocated in your state? What data are assembled? Does it emphasize history, present emotional state of the child, categorization or interventions?
4. What are the most serious types of behavior problems facing your schools today? Do these problem youngsters fit in the traditional classification categories of deviance (neurotic, psychotic, character disorder, etc.)? How well articulated is the special education program in your state to these prevalent emotional-social problems being faced by the schools?
5. What are the alternatives for providing resources if we do not use a diagnostic-categorical base? Develop several alternative plans for interrelationship between education and mental health services for the diagnosis and treatment of socio-emotional deviance. What are the possible implications of these variant plans for service to children? What are the advantages-disadvantages of education having its own in-house diagnostic services?
6. How would you respond to "Diagnostic labels in themselves are not pejorative; they are descriptive and therefore necessary."
7. The assessment and diagnostic processes have often been harsh experiences for children. What can be done by school personnel to humanize the diagnostic process? How do we protect the rights of youngster in diagnosis and the planning of interventions? How do we prevent diagnosis from being an end in itself or merely leading to categorization?

8. What role should be played by the teacher in the diagnosis of socio-emotional disturbance? What training will they need? How can it be provided on a pre-service and/or in-service basis?
9. What should the school's role be in screening for emotional disturbance? How should it be done? What will be the public reaction to mental health screening? Any solutions?
10. Since the school is charged with a responsibility for helping children socialize, how can the school deal with the issue of normative criteria relative to deviance? In this time of individual freedom and life style variance, what are the behaviors which should require school intervention?
11. When it comes to the very severely disturbed (psychotic, psychopathic, autistic) what responsibility does the school have? What are the implications of accepting such responsibility for the schools?
12. What are the resources a good educational program can and should offer in restorative interventions for disturbed youngsters?
13. How would you respond to the statement, "Schools cause much of the emotional disturbance because of their competitiveness and demands for conformity."
14. Is objectivity really possible in the evaluation of emotional disturbance in children?
15. Children's social and emotional behavior is said to be highly variant over time and settings. How might this be evident in the school? What implications might this have for school interventions?
16. How would you respond to staff who say there is no need for diagnostic studies of disturbed children beyond the behavior already evident when the child is referred?
17. Do all mental health and quasi mental health workers need a common diagnostic terminology to deal with socio-emotional deviance? If not, how will we communicate? What are the advantages and/or disadvantages to educators developing their own terminology?
18. There has been considerable criticism of the continuity concept in disturbance, namely that a youngster with problems will persist in this behavior over the years. It has also been said that the self fulfilling prophecy accounts for continuity. What implications does this have for diagnosis and the school's role?

CONCEPTS RELATED TO DIAGNOSIS OF EMOTIONAL IMPAIRMENT

The term "emotional disturbance" is a common one in our lexicons, used frequently in discussions with our colleagues and used with abandon when puzzling over children's behavior. Yet an acceptable definition is elusive. It is sometimes claimed that state special education codes are purposefully vague and ambiguous on this matter for administrative reasons. It seems more likely as Kvaraceus (1960) says in his review that it is impossible to define the condition with clear and absolute standards.

Kanner (1962), who has been a leading scholar in this field for decades, undertook the study of the evolution of the term. His scholarly work found nothing in a search of folklore and primitive origins, presumably because there was not that much interest in children in those days. Early case reports contain considerable brutality and it was not until the 20th "century of the child" that he found a real beginning. In the 1930's the effort to study severe disturbances began to include etiology, diagnosis, therapy and prognosis. It is interesting that the early notion of the "atypical" child disregarded distinctions between various disturbances, even considering such efforts fruitless and unnecessary. (Szurek, 1956) Some of the contemporary proponents of this non categorical position have brought the cycle full circle again. Kanner says: "It is equally strange that, seek as one may, it is impossible to find anywhere a definition of the term 'emotionally disturbed children' which had somehow crept into the literature some 30 years ago and has since been used widely, sometimes as a generality, with no terminologic boundaries whatever and sometimes with reference to certain psychotic and near-psychotic conditons (p. 101)."

Kanner believes the time has come to begin to deal systematically with the many conditions found under the label of "emotionally disturbed children." Much has happened since Kanner's study and confusion has grown. Hersch (1968) has put it bluntly. While at one time, when mental health concerns were the fiefdom of the professionals, there was a tacit agreement about all of these matters, including who was disturbed. But now there is no agreement on who is disturbed, who has a right to say, what should be done, who should do it or how we can tell if we have accomplished remediation. In the present literature it is even possible to find professionals reversing the criterion for what is "sick" and what is "normal." Schizophrenics have made the only rational adjustment to life in our times! Treatment has come to include the primal scream

or an electrically charged prod. The loss of exclusive power by the clinical trinity of professionals over mental health has resulted in a populist type democratization of all mental health matters. New theories and charismatic leaders about until it appears that one-half of us will be diagnosing and treating the other half, and then there will be a role reversal. Some of the current experiments on the impact of role reversal have been both fascinating and frightening. For example, how would any of us fare if we were to be given the "protection" of some of our treatment facilities? We would be normal but have no key or power. We have been delegated to the role of patient. Rosenban (1973) reports the experiences of eight pseudo patients who were diagnosed and admitted to mental hospitals because they said they heard voices saying "empty," "hollow." After being admitted, they behaved normally though their behavior was interpreted as deviant by staff. Some of their fellow patients suspected they were normal, but not the staff. Among his conclusions is the statement: "There is enormous overlap in symptoms presented by patients who have been variously diagnosed...so there is enormous overlap in the behaviors of the sane and the insane (p. 254)." He goes on to say that the sane are not always so, losing tempers, having anxious periods or being depressed for no good reason. The same is true in reverse for the insane who have many normal periods.

I have often wondered what would happen to a "normal" youngster if he were to masquerade as the school's major behavior problem, or be sent to therapy or given the opportunity of placement in a special class for the emotionally disturbed. There is research which shows that even certain first names of pupils set certain incoming responses to say nothing of what being classified as disturbed would bring in. In a research project several years ago I had to interview disturbed children seen by helping teachers. I ran into one boy who claimed he had no problems. In fact he said he got along very well. He held out against my efforts to ascertain "his problem" and I put it down to resistance related to my own incompetence as an interviewer. After the study was over I made inquiry and discovered he was a normal boy, who served as a peer companion in the remedial efforts. So the co-therapist had been mistakenly put in the category of the subject. He knew where of he spoke. A less inner directed youngster might have accepted my suggestion.

The implications of false categorization for emotional disturbance in children is not equivalent to the situation with adults. Our capacity for maligning youngsters knows few limits though of course always for their own good. This is especially true if the children are poor, have no defenders or if their ways are different from the "deciders." While this is particularly true of those who are categorized as delinquent, children and adolescents, still being dependent, are much subject to adult decree. The present counter revolutionary spirit has generated a strong push for the legal protection of children, now even to the point of making it difficult to obtain legitimate and needed assistance.

Parents and youth will soon have to get involved in court suits to maintain the right to get help. The struggle to provide the right to treatment and concurrent protection from exploitation is coming to the fore in all mental health work including those related to school services.

Now this area of contention over procedure and treatment is precisely what makes the case for diagnosis, adequate and proper diagnosis. There is no way to assure fair mental health treatment or freedom from treatment for children unless the total nature of their situation is known in depth. The need to provide both depth and breadth in this matter is to protect the rights and needs of the child presumed in trouble. Since situation - inner and outer - change frequently with children, the assessment must be ongoing. Because the child is so dependent upon group life, family support and educational success as well as his own ideas about his life, the diagnosis has many folds as we will see later. But adequate assessment is the only way we can hope to prevent malpractice. This is why all of us who work in anyway with the emotionally disturbed children must be knowledgeable and participate in diagnosis.

But what is the nature of emotional disturbance which we are to diagnose? It is too much here to expect a definition which has eluded the scientific efforts of generations, but we can provide a gestalt for our present purposes. In the extensive Rhodes' research, the nature of deviance is explored in all possible contexts. In the search for a nuclear definition of emotional disturbance, the resolution is "a human system in distress...disruptive pattern of human-environment exchanges (p. 22-23)." Rhodes and Tracy (1972) continue that the major feature of the exchange is pain, though there are multiple manifestations involving both the possibility of something wrong in the organism and/or a confrontation with cultural conventions. In addition to the exchange phenomena, one needs to add the condition where, as for example in depressed and anxious states, the pain may be within the individual almost totally though often even then accompanying behavior may result in painful-external exchanges. On the other extreme, the pain may be felt almost exclusively by the confronting condition: the psychopath is not pained but creates it in others. There are other attributes of a concept of emotional disturbance which must be focused on as well, such as persistence of the behavior over time and pervasive nature & the dissonance which results.

The specific aspects of disturbance are to be elaborated when the paradigm for diagnosis is presented; it is a vastly complicated matter as will be seen. Like other broad concepts, the meaning of emotional disturbance requires more description than definition. We are of course dealing with a vast social problem. While there is always reason to question any set of incidence figures, as a general guideline, the data from the national study, Crisis in child mental health, are useful (1970). Two percent are severely disturbed and another eight to ten percent need

some type of mental health help. Of course, socio-economic press and living conditions change the ratio as we know from the midtown studies (Langer & Michael, 1963).

If one takes as a rough estimate of need the three percent of the child population which is the supposed number of referred for diagnosis, the largest category is personality disorders (27%); neurotics are next (26%); mental deficiency including brain injury (13%); psychotic disorders (8%); and transient problems (26%). This is, of course, only general orientation for the start of our study. Since growing up characteristically involves some dissonance, such as a baby giving up omnipotence or an adolescent struggling to find himself, emotional disturbance represents a state of intensity beyond the normal growth variance. We commonly speak of general states of emotional disturbance. As indicated, first is the neurotic where there is anxiety and tension within the person stemming from unresolved conflict. Since many such children "act out" their behavior, there is often a great deal of external conflict as well. A second major category is that of personality disorders, with inadequate socialization. Here the person pursues his own impulses with little or no concern for others, the extreme being found in the sociopathic or psychopathic condition. There is most frequently great pain in the external system in such confrontation. The third category is the psychotic condition, severe depression, autism and schizophrenia. Here a lack of reality perception and atypical modes of thinking are basic: they do not see or react to people and conditions in a reasonable way. They may be cut off socially, preoccupied and not even recognize what belongs to their own body and that which is external. Such behavior is not compatible with minimal societal expectations and it is very difficult and painstaking to establish any useful communication, though some do respond. It is to be noted that any type of special education disability may also be subject to emotional disturbance of various kinds.

Another general way of thinking about emotional disturbance is at the other end of the dimensions which represent mentally healthy conditions. Jahoda (1958) developed a compendium of the conditions of positive mental health. These include positive and open attitudes toward the self, self actualization, a balance or integration factor, a sense of autonomy, environmental mastery and perception of reality free from distortion. The absence or low level of competency in these areas would be the definition of disturbance.

The Current Status of Diagnosis

Recently, after a class dealing with the processes of mental health, I had occasion to walk down the hall with one of the more alert appearing members of the class. He expressed his interest in the topic and his devotion to special education. In particular, one of his mentally retarded charges had perplexed him until he had made his diagnostic

analysis. He did this by looking up his birthdate and working up his astrologic chart. Then it all became clear what to do and he saw noteworthy progress in the youngster. He has done this with all the youngsters he works with to considerable advantage. He asked me if I made much use of this method of diagnosis which had now become basic to his professional work. Something in my non-verbal communication must have given him the answer for, as he continued his exposition, he said, "I guess you are not into astrology."

The pathos of this event altered somewhat when I related the situation to a sophisticated professional group of special education practitioners. There was a little laughter followed by a suggestion that the Oracle of Delphi would be even a more promising possibility: the Oracle was always right if one could understand the riddle which usually had several good answers. This method would be much faster and cheaper than current methods or even astrology. The general laughter and nodding of heads in the group was a commentary on the attitude toward diagnosis held by many professionals today. Once vaunted, it is now in low repute.

The history of psychology is replete with examples similar to what has happened to diagnosis. A creative genius develops a method which is really dependent upon his own unique ability for its unusual utility. The lesser disciples without the genius who follow, ritualize and over-extend the process and carry it to absurd ends, even where research would make one skeptical. In diagnostic work we have also built up special professional roles as of diagnosticians. Any role tends to expand its own rituals, terminology, instrumentation, training and initiation rites. And the result can lead to rejection of the service by those who are supposed to place it at high value.

Mensh (1966) sees the clinician utilizing data from interviews, objective and projective tests leading to inferences about etiology, present conditions and the individual's assets for handling the problem. He says the psychologist "may" also include data from school, work, family and other sources. This "may" represents how things so often go awry. Real life data comes to have lower status than contrived life stimulating test data.

One of the fixations of the diagnostic professions has been on etiology. How did the present come to be? What went wrong in the developmental history? This historical approach was misnamed dynamic, because it was concerned with motivations and underlying causation. Of the three facets: How come the condition developed? What is the condition now? What should we do about it? The primary attention was to "How come." Furthermore, if you take a particular theoretical stance, you prove the past by the present, since all is preordained by the personality theory. These limitations alienated those of us who were the existentialist psychologists, but even more it alienated those caught

with the "What should we do?" responsibility. The on-the-line worker wants help in deciding what he should do, right now, on practical situations, every day a thousand times. Thus the overdrawn focus on the past set the stage for a complete swing in diagnosis: forget and neglect the past. Rogers stuck the pin in the balloon with his existentialism. His creativity, obvious personal intuitive skill, communication ability and conceptual base gave Rogers leadership stature and effectiveness. But again the followers seldom functioned at this level and naive romanticism and the less you know the better reversed the priority of who could say things about people and who could diagnose if you will. The counter culture added its anti diagnostic flavor. It has become anti humanistic to explore personality with formal methods. The behaviorists were simply not interested in all the clap trap of the past. Start with a current behavior baseline and go from there. These factors led to the reaction against diagnosis.

Not that this dealt a death blow to diagnosis or the role of the diagnostician. There are now more engaged in this activity than before. We have proliferated: psychiatric diagnosis, psychological diagnosis, sociological diagnosis, behavioral diagnosis, educational diagnosis, and so on. Anyone who contemplates influencing the pattern of diagnostic efforts will have to take on these vested interests. But he will find many allies within each mental health guild, for there are the stirrings of change in the process of child assessment.

Classification and Diagnosis

To many professionals diagnosis and classification have been equated. The end result of the diagnostic process is to categorize the youngster, put a label on him. The negative possibilities arising from this process have been of high concern of recent years. Yet, as has been recognized, for the most part money is still provided on a categorical basis. Rhodes once suggested we would run out of candidates before we ran out of categories. This is an example of the continual contention in mental health and special education between political-administrative function descriptions of and the search for a response to the psychological issue at the basis of the problem of a child through classification. We finance "programs" but any articulation of the substance of the experience a child has is still happenstance. So far are we still from understanding the true function of diagnosis.

It is most unfortunate for this conference that Hobbs' project report (1974) is not yet available. An outgrowth of both the quandry and debate concerning classification of childhood disturbance this work should for once and all pull together the material needed for the professions. Certain rough draft material (Cromwell, Strauss, & Blashfield, as well as Prugh, Engel, & Morse) has been available and there are some suggestions of directions for consideration of these matters.

Whether classification is desirable or not, the fact is, the desire to make some sense out of the welter of deviant behavior has led to classification systems. The two motivations for developing systems are to aid in scientific study and research on one hand and provide the basis of selective interventions on the other. Diagnosis refers to identifying and distinguishing between categories of disturbance within a classification system. The process in itself carries no perjorative significance though in actual practice there are many ramifications because of attitudes relating deviance to "badness" and evil. It should be noted however that there were times when psychotic behavior was reversed as a mysterious gift.

It has been impossible to develop a classification system which has the intrinsic meaningfulness and utility to the wide range of individuals involved with disturbed children. Since there is not even an accepted definition of the term itself, this is small wonder. Efforts to organize a classification system on historical case data has produced no agreement. Classification based upon family dynamics has not found broad acceptability (Prugh, Engel, & Morse).

The effort to search out patterns or syndromes from massive collections of behavior data has been facilitated by computers. But what goes into such data banks for analysis determines what will come out, and descriptors are seldom uniform. The extensive national sample study of Cromwell (Cromwell, Strauss, & Blashfield) suggests that the connection of current status with either history, intervention or prognosis is still the elusive sought after goal, though he has made the first conceptually sound start.

The only classification system with official recognition, and this only medical, is the psychiatric section of the American Medical Association Standard Nomenclature (DSMII) which is the basis of our national statistics (American Psychiatric Association Committee on Nomenclature and Statistics). Psychiatrists working with children felt the need for a more exhaustive child oriented classification during the evolution of the DSMII. In the 1967 the Group for the Advancement of Psychiatry produced a system (Group for the Advancement of Psychiatry, 1967). Some twenty-four methods of classifications were first reviewed and found inadequate. The system which evolved utilized physical, developmental and psychosocial forces and was broad in base. The inclusion of healthy response categories provided a far more balanced set of criteria. Only inferences concerning historical antecedents and intervention proposals are embodied in this system. This report has received a great deal of discussion and considerable acceptance but it falls short of meeting the needs of a universally acceptable categorical system.

In 1967, the World Health Organization developed a system which has come to be known as the WHO Classification (Rutter et. al., 1969).

While it is in many ways similar to the GAP process, the WHO Classification is tridimensional including three axials: (1) the syndrome (which includes neurotic, psychotic and other categories); (2) level of intellectual functioning (normal to severe subnormal); (3) physical-social etiological factors (from infections and developmental to environmental). As in the case of most efforts, the desire to be encyclopedic about cause and the child's present state results in a mixture of specific signs and broad categories in the listing which is confusing to say the least. Nor does one look with hope that the International Classification of Diseases Revision Conference in 1975 will come up with any better solution. The essential problem is that the variance in the way individual personality develops and the uniqueness of the patterns which evolve are not subject to neat packaging considering our present state of technology. Cromwell has recognized these complications which others appear to ignore. What we can conclude for our present work here is that no time should be spent trying to produce a holy writ of classifications to impose on everyone.

Especially for the scientific community the lack of standardization and equivalency is a major deterrent to progress and has produced a kind of pseudo science. One never knows the nature of the problems depicted or the nature of the treatment given from the research reports. Cures are reported but one does not know what was cured or how. Replication is impossible. We do not even have incidence studies which can be compared. For treatment personnel, the lack of an accepted conceptual system encourages almost any theory or treatment. It is not really possible to discover the selective merits of various approaches with anything but the roughest approximation.

As mentioned before, a major effort over the years to subject this problem to scientific discipline has been Cromwell's research (See also Cromwell, 1972.). While his detailed analysis of the national sample is not yet available, the pattern of his findings is emerging. Diagnosis is divided into these categories: etiological (case history data), current characteristics, treatment indicated and prognosis. These are seen as the chain comprising diagnosis, but elements will need to be added if we are ever to lower the general incidence of a condition using the public health model of prevention. Prevention is of course a significant part of the school's mental health responsibility. Cromwell also makes it clear that we cannot equate the processes useful for work with children with those for adults. By assembling evidence on the viable combinations of etiology, status, intervention and prognosis he will circumvent the gross over-generalizations and false assumptions we now make. This comprehensive work deserves study by all who are involved in diagnosis, and we anticipate the fruits of his extended analysis.

Engel has clarified the differences between diagnosis and classification, after (Engel, 1969) pointing out that many efforts stop once the classification has been made. First is the level of discernment of

differences in which the child's problem is compared to a relatively homogeneous group and contrasted regarding the elements which separate him from that group. Second is the level of assignment of values where inferences and hypotheses imply some intervention. Third is the assignment of a "label" which is an act of classification and leads to the selection of given professional help. Finally, there is the explanation step of reconstructing the etiology with attention to an evaluation of the child's strengths. In fact, this step implies the integration of all aspects of the individual in the process of assessment.

Gough (1971) recalls the fact that in 1960 only 17% of therapists surveyed agreed with the statement, "It greatly speeds therapy if the therapist has prior knowledge of the client's dynamics and content from such devices as the Rorschach and T.A.T." One wonders whether this is a general statement relative to the value of understanding dynamics or a reflection concerning these particular instruments. He states: "The function of diagnosis is to identify the problem the patient has presented in such a way that an appropriate and restorative treatment may be carried out (p. 160)." He also points out that those who decry labeling are not loath to use the label "medical model."

Causality in diagnosis is the search for the structure of the total field in which unfortunate components are to be found, whether historical or contemporary. The purpose is to forecast what the youngster will do in the future. While it is a general truism in psychology that the best predictor of one's future behavior is found in examining past behavior, with children and especially those designated disturbed, such a rigid continuity of behavior concept has been criticized. Too many things change in children's lives.

The continuity issue is a critical one for schools. Are emotional problems at one age predictive of future maladjustment? Lewis (1965) and Kohlberg (1972) have both spoken to this issue and raise question about long term continuity. We all know of children diagnosed as disturbed and then found to have no problem when resources were finally available. A problem pupil in the fourth grade adjusts satisfactorily in the fifth. Growth and circumstances change things. However, with 400 Losers (Ahlstrom et al., 1971) and Deviant Children Grown Up (Robins, 1966) as well as with autistic children, it is clear that certain biological and social orientations combined with certain situational press will be predictive. Autistic young children have a most guarded prognosis. Internal resources like intelligence or basic temperament and external resources represented generally by the index of higher socioeconomic status or a deeply caring family have to be considered as well for they are recognized positive factors for change. We can thus underline an essential quality needed in our diagnostic system: attention to resources the child may have equal to the attention to debilitating conditions. Some have considered the continuity effect to be the result of self fulfilling prophecy: the act of labeling a child encourages

certain responses to that child which in turn sets up reactive sequence that look like internally produced continuity but is really forced by external stimuli.

In the endless search for ways to make diagnosis easy and sure, we are always seeking short, quick, foolproof devices, tests or scales. But there is no device more effective than the user, or more productive than the user's broad knowledge and understanding. In diagnosis Gough considers the capacity to think inductively as of paramount importance over technical skill and apparatus. That is to say, meaning and not a score is to be the outcome of data. Meaning has to do with understanding, and is subject to the knowledge of those who utilize the information. The more we anticipate appreciating the unique nuances of an individual child the less we can depend upon short hand labels. Labels come to be useful only to a working team in constant close association where in-breeding results in consensus and common meaning.

Diagnostic Implications of Inner-Outer Controversy

The current controversy concerning how much problem behavior can be attributed to the individual and how much can be attributed to the environment has several important ramifications for diagnosis of emotional disturbance. The examination of this matter will start with a look at the controversy in general terms. This will bring us to the importance in a diagnostic process, of examining the interface of person-environment in a far more precise way than is usually done. We move next to the complicated matter of a normative base for considering deviance, especially as this is seen in the school setting. Finally there are theoretical issues which enter this controversy; always in the background there is the developmental level index which is so important with children. Thus it is that the heated argument over inner and outer directedness takes us into many areas.

On the face of it, the polemic between the psychological-personal causation of behavior and the sociological-environmental causation is absurd. This is not an either or, but a case of how much, when and in what ways are these two approaches helpful in diagnosis. It is a matter of balance and the fashion changes after excess in either emphasis. Like most stark exaggerations, the argument belies the complication of what the situation actually is, of personal responsibility for one's behavior, of social learning and a host of important issues. But Don Quixotes are running about with theoretical spears challenging windmills. Declare your scapegoat--the person or society and make a career of fighting for one or the other. After all, we see both consistency and variances in our own behavior and behavior of others as well. We recognize the persistence of personality styles in our friends, verified both by research and class reunions. We also know we frequently behave "out of character" so to speak. Most of us act differently in a place

of worship than at a cocktail party. We do not look the same under threat of failure, as when we have just won the sweepstakes. If one rates the aggressive behavior of an aspiring athlete on the junior high football field and in an English classroom can we use the items or assume the same frame of reference and get for any true meaning? Thus, despite Bloom's evidence on the consistency of the underpinning of personality, certainly we behave in a variety of ways in a given year, day or even hour. Consistency then must lie in the interactive equation of person and place but even here time is an elusive interloper. Years ago in our therapy camp, Gump converted our clinical observations about the impact of settings on disturbed children into quantified information. He found that the relationship of a youngster and an adult leader were vastly different in a swimming setting, a shop activity and cookout. The cookout setting turned out to be singularly chaotic--preplanned chaos if you will. Teachers know there are "high times" for groups. Administrators recognize that a problem for one teacher or in one group may evaporate in another setting. This means that the diagnostic process we accept must give equal consideration to internalized behavior patterns and reactive patterns. It is not uncommon to see, in a well designed classroom or institution, severely disturbed youngsters behaving quite normally. But, over time and upon closer examination, there will be evidence of outbursts and atypical behavior even in the mediated environment.

The medical-psychological model has been categorized as only concerned with causation stemming from the internal nature of the individual. While there has indeed been much overemphasis on the internal aspect, not all of the so-called dynamic psychologists took this stance. Redl (1966) has always emphasized the behavior producing potential of milieu elements. Ross (1964), specifically dealing with classification in child psychiatry has said, "With children...it should be possible to define more precisely the nature of the interaction between the particular qualities of the individual and particular qualities of his environment that made it impossible for him to adapt to this environment... (p. 1)." His unorthodox classification schema, proposed for all disciplines, includes the following categories of maladaptive reactions: secondary to gross environmental stress (brief and prolonged); secondary to cerebral maldevelopment or injury; secondary to unconstructive interaction between the child and his emotional environment; and psychotic reactions. The unconstructive reaction group includes the unorganized child, negatively organized child and the striving child.

The recognition that any valid psychological analysis must include situational elements is not news: Barker (1968), Bersoff (1971), and Fischer (1973) among many others have suggested just this. The theoretical outcome of this is to consider any description of behavior as only valid in reference to the specific setting of observation (Dewey & Bentley, 1949). This implies the ultimate in situation-specific response in contrast to personality produced responses. Again, the effort

required to systematize the huge variety of interactive possibilities is avoided if one takes a polarized position of all environment or all personality. This is one way to get off the hook.

Very likely, one reason for the under consideration of the external conditions in diagnosis has been that there are many tools for studying the person and his nature (valid or not) but few to categorize the environment and fewer still to categorize environment as it effects a given child. In truth, there have been attempts to codify settings, but we have seldom had the courage to even try. However, the systematic codification of environments is finally moving along more rapidly. For example, Mercer has been interested in the impact of environment first on intellectual functioning and subsequently extending into affective areas. Her Adaptive Behavior Inventory for Children seeks to cover role behavior in the primary social systems: home, neighborhood, school and community. In addition, she has developed a health history and impairment inventory as well as a physical battery.

Thanks largely to the determined efforts of Moos and his group, we are promised ways to assess the various environmental presses which a child endures. There will eventually be nine of these Social Climate Scales, four of which are of direct concern to those of us working with children and youth: family environment, group environment, classroom environment and community oriented programs environment. Another focuses on therapeutic environments. The ones on work and penal environment might also have some uses in education as well. While these will not solve the diagnostic problems, they can eventually be translated into indices which will apply to the environmental components in assessing deviancy. Such analysis will produce a new issue. If the environmental index is healthy, and the child still has seriously deviant behavior, it is obvious that he cannot utilize this resource as it stands, and the interaction between person and place still has to be understood. But it will be a great help to recognize how many times what appears to be deviant behavior is normal response to a deviant environment.

The need is for critical study of the interface. If we are agreed upon the description of disturbance as a dissonance in an interactive system as Rhodes proposed, then we can make this the cutting edge of the diagnostic process. When it is intra individual the question is what interacting forces generate the conflict. What is the nature of the conflict and how does the individual dissipate his anxiety and tension? When it is person-circumstance conflict, just what happens at the point of contention? The history of such events must be studied in depth, just as we have in the past studied case histories. What is the chain of events? How long are psychological charges kept in storage on both sides ready for an explosion? When we can once say, with Moos' analysis, this is an hygienic supportive school, we will still find that, for various individuals due to their own perceptual fields, that

good school is at times provoking. In the case of some pupils, the very sight of a teacher or the sound of a reasonable request can set off a reaction. It is still person-place situation without blame for either. The acting out incident may be an infrequent or unusual occurrence but this does not mean such behavior is atypical, bad or wrong. If other behavior is caused, so is this behavior. The balance of causation may lie within the individual but episodes of behavior are still usually provoked by external triggers. It is just this critical interactive process which can give us real understanding of the nature of the problem. Thus, we do not diagnose children and situations in a vacuum; we see the system and seek to appreciate the subtleties of what takes place. The match or mismatch of an individual child's needs and the available support system is ideosyncratic. Even in a category of handicapped children, as Thomas and his cohorts have shown (1969) a given biological predisposition does not preordain a given state of disturbance. The critical element is the precise nature of the interaction. We seek to know the nature of this engagement.

Because of the unique nature of individual growth, studies of groups produce relatively less than is needed for diagnostic purposes. For this reason we have come to lean heavily on the "N of 1" technology which seeks to expand the unique universe of the individual rather than to overemphasize assumed similarities in categories of children. The stereotypes thus implied tell us little, for the interesting thing is these "types" never run true. We become excited over a correlation of $+0.40$ between a stereotype and a symptom. Such a correlation can be highly significant if we have a large enough group. We get ecstatic if it reaches $+0.60$, and yet all we are really saying is that we have found relationship in the group being studied which is better than chance, though the $+0.60$ accounts for only a little over a third of the actual variance. To protect ourselves we say, of course this correlation does not tell you anything about the single member of the group. That member may be dancing to the tune of the unaccounted for variance. Certainly for diagnosis such information about general tendencies can be misleading.

If there is any one aspect which characterizes educational theory and even practice today it is the awareness of the need for individualization. Diagnostic processes which utilize an "N of 1" approach puts the focus on individualization. We have the counterbalance Engle indicated by giving weight to how the child is a unique neurotic as well as recognizing the underlying style of his deviation which is neurosis. Since the "N of 1" is also a format which can be subject to research and to systematic data assemblage it adds discipline to the oft criticized case study approach. Since information on an individual from psychological tests, interviews and observational data lack the precision which we would like, it becomes important to increase the strength of data through consensus. We say he is aggressive. How many sources of this do we include? Does he recognize aggression in himself? Questionnaire and projective test data may differ. Do we have

observations in a variety of settings? When there is consistency from several sources we have a different phenomenon of aggression than we would have were it only from a projective test. This helps to pinpoint the true nature of the psychological behavior in "N of 1" studies. Second, when we come to look at the profile of specific information assembled in a systematic fashion, this can be used to make predictions for scientific evaluation of our intervention efforts. But we can only make predictions based upon purified data and the theory related to the "N of 1." Where we find a number of cases with really similar psychological patterns on significant dimensions, of course the predictions must be equivalent. While this is only a brief glimpse of the approach, it is emerging as the path away from static actuarial research toward the individual. (Morse, Schwertfeger, & Goldin, 1973). To conclude, the criticism of an individually oriented diagnostic schema as being non scientific because it cannot serve research is no longer tenable. Also, the new system accommodates both information about the individual and his environment.

The Confounding Issue of Normative Formulations in Diagnosis

Once the individualization matter is managed, we are faced with the nature of the information we put in a profile. There is always a normative problem relative to mental health data. Professionals in the "upbringing" professions, of which education is a primary example, are especially involved with this issue. The goals and sanctions we employ constitute a value-normative base. The concept of social-emotional disturbance is only possible with a backdrop of what is non disturbed or acceptable behavior. There are two parts to this: first is the state of being we would wish for every child. Our goal may range from helping the child live without psychic pain aspiring for him the self actualization of Maslow. Thus we have some norm or expectation which directs our effort, though it may never be articulated. A second part of the normative problem is the judgment about the type of behavior necessary for a child to accomplish his social contract. In a society aspiring to be democratic, there are behaviors which are necessary to reasonable social functioning. There are also behaviors which are threatening to life and welfare. What is the role of the school in both the eventual and contemporary emotional behavior? Time was when we went blithly on applying our own personal standards to children's without ever raising a question. This is no longer possible, as school personnel recognize. No greater problem faces society today than this one of norms. While it may be more interesting to be for or against Szasz or Laing and their rejection of norms, the real issue is to face the fact that values and attitudes constitute our major current societal dilemma. Most lay persons and professionals do not see schizophrenia as the desired state, nor do we find psychopathic behavior (except in war) as acceptable personal states. But what we do about other so-called "deviant" behavior is rightly criticized. What kind of behavior do we believe is right to impose on each other? What are the limits we can accept? In this

way social-emotional deviance embodies the whole affective domain of attitudes and relationships. Of course there can be no meaning to any diagnostic process except as a normative base is implied or established. While, as we saw early on, a definition of emotional disturbance eludes us, in a pragmatic way, what we diagnose is what constitutes deviance. Intelligence is what IQ tests measure: deviance is defined by the diagnostic data.

Philosophically any non interference with any emotional state is arguable on the basis of "who has a right to say." Cruelty, gang sexual assaults, violation of person or property - these are behaviors unacceptable to deeply held social sanctions. They destroy the democratic social contract. But just what is the behavior code which constitutes the norm? In high and low places certain types of dishonesty are tolerated, children to grow up hungry, we fall short of any real equality. We even rename behavior to escape sanctions. Stealing becomes ripping off. Violence becomes confrontation. What are a child's rights relative to mental health? Does a child have a right to depression? Low self esteem? Alienation? The use of drugs in search for utopia? Selecting a life style of violence or non production? Who is to say what the norm should be - the 12 year old, the parent, the court, educators or psychiatrists?

We know that the very serious emotional problems are but the top of the iceberg when it comes to affective disturbance. For every autistic child there are many more than the baker's dozen with less acute but very serious social-emotional problems. Here the limits of the right to variance come in. Different life styles do have implications in an interdependent society. If persons, as a few able and qualified young adults have, see a life on welfare as a more desirable mode than working, it does cost others though it is no threat to life. If the money we spend dealing with value deviation which require social policing, prisons and other institutional care were converted to increasing the standard of living, it would make a real difference. These are all problems which have their genesis in values, attitudes and emotional behavior. The cost is a social cancer. To account for the total, add in the armament bill which is a tribute to gross affective dissonance between peoples as well as the particular deviance of certain leaders. Mental health is not a matter alone of those with personal misery: everyone is involved. Diagnosis must be thought of in this larger perspective. But where and how does one draw the line concerning a child's behavior? As Fromm (1973) has said, protective aggression is necessary while malignant aggression is unacceptable. Since the Supreme Court has not been able to delimit the degree of individual freedom versus individual social obligation in any clear manner, perhaps we should not dismay. But we are everyday making judgments on the basis of diagnostic information that reflect an opinion about the degree and substance of conformity required of the young. The challenge is fair use of diagnostic processes relative to basic emotional deviance and the interactive system.

The aim is, as best we can, to ferret out elements of significance which if not changed will lead to significant personal and social abrasiveness and pain. We must be consciously aware of the norm dicta we are employing at any time.

The normative issue is of course more pressing than ever before because of the expanding right to variance in all aspects of life. Schools are in the center of this. The right to variance should be distinguished from the right to malignant deviance, malignant to the person himself and to the society which he is a part. The deviate who moves off as a hermit or establishes his own society apart from all others is one thing. The deviant who must or chooses to abide with others has quite a different impact. Diagnosis should never neglect either how different we are one from another or how alike we all are. There are many ways to be different without hurting each other in our society. Though certain conformity in some areas is prerequisite to any social order the goal is certainly not uniformity. Certainly schools are to enhance differences. Diagnostic and screening processes which filter out disproportionate numbers of minority groups are thus suspect. Only when we look at a system as a whole of person and environment, with stress factors included, can we deal with this matter.

When fear of certain ideas, styles of behavior or cultural sub groups dominates those in power, narrow circumscribed norms take over and non harmful differences are interpreted as malignant deviance. One can differ in belief about God but not on the rights of others to worship. One can differ on the value of a given education, but not to the burning down of the school. In a society which has a core of stability and self security, the tendency to social deviance which is present in any society all the time does not infect and can be tolerated because of its low power to spread. In a social setting fraught with contention, guilt, anger, anxiety and dissatisfaction, the deviate becomes a leader as Fromm points out (Fromm, 1973). The contagion of many negative social moods in a school certainly are evidence of the poor state of health but the deviance is in the system itself rather than all of the individuals. Diagnosis must be as attentive to this condition as to the intra personal, and norms apply to both.

It has been said that a normal evolution through adolescence requires an accepted set of values embedded in the social order; satisfied, well functioning adult models for identification; and increasing steps to personal privilege as one meets certain expectations based upon the adolescent's evidence of readiness by given achievement. These conditions produce a stable youth to adult transition. Whether we would want it or not, we don't have this condition. In a relatively normless or at least rapidly changing norm society, behavior which was frowned upon, forbidden or punished today may become the standard tomorrow. New values become dominant as the society evolves. Increased concern about the quality of life versus materialism is a case in point.

They may call a war and nobody will come. Because of our mass media with world wide coverage, we have lost our perspective on the norms which still do exist. The reduction and distortion of information seems inevitable. Are all children on drugs? Nobody believes in the value of school anymore? Youth follow Alice Cooper? Adolescents are engaged in orgies? All kids belong to gangs which would kill? Nobody believes in work anymore? We seem to be afraid these conditions are the true state or fear such is coming to be.

The fact is we must be circumspect in sizing up these conditions for a diagnostic base remembering there is more stability than the mass flood from the media images. But this understanding will not come without a lot of effort on the part of adults who understand the situation and then can help adolescents understand it for themselves, sorting out the useful norms.

Schools have had a particular problem as socializing agents of a society in flux. The school's overt or covert norms have often been cast in terms of the dominant cultural values even with regard to behavior where the deviance sorted out certainly did not inflict ill on others. At other times the organization of the school itself was such as to be dissonant with the legitimate needs of children. Our responsibility then is to make certain that our diagnosis is concerned with deep lying human values and personal considerations and not ephemeral matters of taste. When diagnosis focuses on mere violation of conformity it takes on a punitive cast. We then move into the application of narrow self anointed characteristics of behavior rather than real socio-emotional disturbance. We have seen this happen in regard to certain clothing, hair styles and attitudinal dispositions. The problem is that hair styles may be part of a fundamental problem or actually be a sign of independence and self assertion as part of normal growth. Perhaps hair style is the overt sign for seeking new values which will become eventual norms of society. The right of a teacher to wear a dark arm band as a sign of objection to the war can, as we know, go to the Supreme Court. Here the diagnosis is of a paranoid social system, fearful and anxious without legitimate cause. Diagnosis cannot be involved with norms which are matters of "taste," or the way those in power happen to like things to be. Children from sub cultures have many ways of behaving which cannot be considered as socio-emotional deviance though in certain ways they may be different from those who happen to run schools or other institutions. Actually some methods of assessment, based upon a normative curve, go even further and suggest that those who are + 2-1/2 SD from the mean are deviant, regardless of the personal or social meaning. As Mercer has shown, diagnosis can be designed to incorporate fair evaluation of sub culture differences and thus give a more accurate picture of the true condition.

It should be pointed out that diagnosis which is both judge and jury is hard put to it to maintain a fair balance. If the diagnostician

works for a school system and a child is referred because of unacceptable classroom behavior and no deviance is found, there may be some unhappy recipients of the diagnosis. It is just as necessary to diagnose situational deviance as it is to diagnose the individual but it is much more complicated politically as well as more difficult to accomplish.

We can now start to compile the essential factors embodied in the diagnosis of socio-emotional difficulties. On the situational side we are looking for the external stress conditions which have been so well described by Langner and Michael (1963). It is known that low SES constitutes stress as well as the secondary neighborhood conditions. We can add the effect of rejecting families, incompetent families and the like which produce unsatisfactory child roles. We look for peer culture interaction of a devastating type. We are concerned about the supportive or deleterious impact of the school culture, teachers and educational expectations. About the individual child, we are concerned with his attitudes toward himself, his self esteem. We look for strength to cope with crisis and are alert to his potential assets. We want a balance between autonomy (self directedness) and interdependence. We examine the interpersonal relationship quality for meaningful relationships, evidence of empathy, the respect for the rights of others, and involvement with social enterprises. We look for his expressiveness, creativity and productivity. We are concerned about the values and moral development achieved, the anxiety and the satisfactions with life. We are interested in the cognitive processes, the reality testing and the use of symbolic processes to deal with affective states. And no comparison to myopic norms will be definitive. In fact, our diagnosis may well turn up child dissonance with an outer system which reflects a positive deviation, just as Maslow found his superior, self actualized persons were often abrasive to certain conditions around them. We should be just as interested in the protection and sustenance of these socio-emotional deviates of the positive kind as we are to help those who need therapy.

Theoretical Considerations and Developmental Conditions Related to Diagnosis

There are two final matters which must be part of the awareness in setting up a diagnostic process for psycho-social deviation. The first is the recognition that one's theoretical stance concerning personality development, impact of early experience, flexibility of adjustment, function of insight and a host of other items conditions one's diagnostic position. In fact, there is no diagnosis apart from the total psychological conceptual system, so again it is little wonder we do not all agree. The second matter is how the child's developmental level conditions the meaning of an incident of behavior. A preschooler may have curiosity about sexual differences which leads to exploration which many would say is normal. An adolescent's sexual interest expressed in the same

way might not be accepted in the same manner. When a child indicates that he shouldn't do something because his mama said no, we consider this reasonable at his developmental level; if a high school student sees no more than this we might think otherwise. Lying and fantasy are mixed up at one age, but a twelve year old who can't distinguish the two is in serious difficulty. We are always, then, dealing with some type of developmental norm. Children are not considered miniature adults. They live in their own world.

As has been illustrated so completely by Rhodes and Tracy (1972) we are at a time of crisis in theory. In spite of the glaring necessity for a commonly accepted theoretical base for diagnosis, it simply does not exist. Much of the controversy in diagnosis is really controversy over theory. If one doesn't accept the presence or importance of the unconscious, this leads to certain diagnostic decision. Since there is no agreement on the theoretical base, it is necessary to make clear what our theoretical propositions are so that a person can agree or disagree. No one operates without theory. It is a matter of how well articulated, integrated, how comprehensive and how tested our theory is. We all have beliefs about human nature. If one is concerned with the child's total nature, many concepts about human nature will be involved. If all one aims to do is to foster specific distinguishing "saw" from "was", perhaps little is needed: if the goal is to help a youngster utilize symbolic expression or become an organized self or a productive citizen, many more considerations enter in.

Unfortunately many educators are taught only a thin theory, or are indoctrinated with a given theory not knowing alternatives. There is no place for amateurism in working with disturbed children. Educators need to know as much as the psychologist and psychiatrist about mental processes. We need to know that there are various concepts which have been seriously entertained to explain behavior and behavior change. The way theory has been taught as an end in itself has frequently led educators to contrast theory with actual happenings. We hear, "Well, that's all right in theory, but we have to face facts." This means the theory does not ring true as explanatory information to understand the "true facts." In truth the meaning of theory is in its power to explain the facts and provide understanding. Of course we don't all purchase our understanding from the same dealer. In some places it is thought to be naive or indecent to question the theoretical concepts behind a diagnosis. Is it any wonder so much diagnostic information leads to files rather than action? One's theory contains concepts about human nature and the potential and process of change. Whatever the schema, it will bear heavily on the total process of diagnosis.

The theoretical basis implicit in this paper has been delineated in Rhodes' study (1972). It is not possible to even sketch in the theoretical basis here, but it is well to remember disagreements concerning subsequent diagnostic propositions may really reflect differences

at the level of fundamental psychological propositions. If you don't think that children fantasy or that fantasy is a big part of life, then you would of course never look for that in diagnosis. Theory and diagnosis are interlocked.

The other aspect of theory especially relevant to work with children and adolescents is developmental. The child is always interacting (not just responding) with his environment. He responds selectively as he works out his life course. In the sequence of maturation, he has many affective tasks which are either accomplished or failed. While no list of these tasks is satisfactory, Erickson's stages cause us to think of the "work" of each age period in a useful way. Erickson lists the tasks in sequence as developing trust, a sense of autonomy, initiative, industry (mastery of basic skills needed in society), identity (evolution of an adequate self concept at adolescence), intimacy (the capacity to realize intimate relationships) and then on to the adult roles of generativity (being able to give and love) and ego integrity (relationship of the self to the total historical process). (Erickson, 1963.) The course of life presents some relatively universal expectations, though the exact time and form differ. When one stage is missed out, there are difficulties in replacing it at a later date. For example the school sees many youngsters whose early life pattern produced a lack of trust. They are often called attention seekers when what they are doing is trying to establish a relationship which they somehow missed. Trust in self depends upon being trusted. Adolescents are preoccupied with their identity and often follow many disorganized ways before they find a new synthesis. Every exploration does not mean a personal career line. Most youngsters have done at least a few delinquent acts in their history but not all become delinquents. Developmental theory offers a sequence of what the child is trying to do over the years to make sense of this world. Without this there is no diagnostic frame of reference. Erickson is not holy writ and other systems may do just as well or better, but all of us use some thoughts about age relevancy as we consider deviant behavior.

As Piaget (1955) indicated, at certain levels, we can expect children to respond in certain ways regarding moral issues: maturation will alter the picture. The dependency of the infant causes us to look more at his organic nature in relationship to his immediate environment. The toddler looks "negative" when he is trying to establish his ability to do things for himself. The preadolescent becomes peer involved and is likely to be overly susceptible to social impacts - no self direction we say. With sexual development and physical maturation come the need for more self understanding, cross sex acceptance and a new identity. The young adult has to resolve his life role in work and family.

In matter of fact, developmental growth is a large part of the work with children. Sometimes growth potentials offer the best hope there is for change. The flexibility, the entering of new phases,

the maturing of the intellectual abilities - such things imply change possibilities for children coming from internal resources. Potentials increase and self expectations change. The only constant thing about childhood and youth is change. In diagnosis we are interested in how the youngster looks back at the way it was and what his hopes are for how it will be in the future.

Now, with special children there is always the added impact of their "disability" on the usual developmental process. Affective displacement often results. What does intellectual limitation mean for adjustment? Or, for that matter, what is the consequence of genius or talent, growing up in a "normative" world? What is the developmental distortion if one is limited in visual or auditory stimulation? If one cannot locomote? None of these conditions in themselves are a necessary cause of emotional difficulties but they are hazards. The search for universal emotional traits or problems in the special education categories has shown some propensity to given problems but no evidence of a set affective deviation related to category. For example, each learning disability child handles this particular disability in his own unique way (Morse, in press), though there is bound to be more stress and it shows up in poor self concepts and evasive behavior. Yet even this is not universal for many do make normal emotional and social adjustments. Special children are first of all children, and should be thought of that way.

We can conclude this section with the awareness that psychological diagnosis of socio-emotional deviance is not an isolated act, set in a particular time frame and consisting of a given set of tests. It rests upon a cultural base, on theory of the nature of self, on concepts of learning, and on developmental conditions. Anything less is superficial. With this at our backs, we should next divest ourselves of some of the myths which have found their way into the diagnostic folklore.

Myths

The total diagnostic process for children with socio-emotional disturbance has characteristically been comprised of four inter-related segments: (1) etiology, or the history of the developmental interactions which led to the present state; (2) differential diagnosis, or the particular conditions and dimensions which characterize the individual at the present; (3) the psychological indications for relevant interventions; and (4) prognosis and follow-up. However, as these four processes are currently conducted, they are often far from providing the information needed by educators. There are questions of the substance, the order and the priority of sections which need attention in an effort to create an adequate diagnostic service for schools. Before setting up a proposed system, there are assumptions or myths about the diagnostic process which will be reviewed. Certain of these

myths have come up already and will only be mentioned. Others will require more attention. Freedom from these myths will be necessary if we are to establish a viable alternative to what is going on at the present time.

1. The myth that the diagnostic dilemma is simply a semantic one. If we all used the same language the whole classification confusion would end. But we have seen that theoretical differences would still be with us, and are more basic than semantics. Diagnosis cannot take place apart from a theoretical base, acknowledged or implied. For what they are worth for counting purposes and research, there are complicated systems which require a reference to a glossary even for those who use them regularly. The fact that common communication is not always served by even these systems is shown by the debates over categories and meanings, though Prugh (et al.) has reported an encouraging test of the consistency for the WHO system. There will be a continuation of various systems geared to unique needs rather than general communication.

2. The myth that "diagnosis" is accomplished by a given set of instruments and techniques administered by the diagnostician's guild. Part of this myth is that diagnosis is a sacred rite and the information can be understood only by the high priests of mental health. What is necessary in a diagnostic study is what is needed to help a youngster. There are times when we already know enough to make decisions and the difficulty of doing is holding us up. Yet a battery of tests is often given anyway. On the other hand, when we don't understand enough to plan extended and diverse diagnostic work may be required. Certainly no diagnostic terminology should be beyond the comprehension of a classroom teacher who has studied the area. What we need is common communication and meaning cast in basic English. Mental health personnel and particularly school psychologists are often accused of restating what a teacher already has said in the referral but in esoteric terms and as test results. No new insight has been added in such cases.

On the other hand, it is not easy to understand ourselves or others, or especially to remember what it is like being a child. By reason of this difficulty no diagnostic process will be a substitute for psychological awareness. All involved in work with disturbed children must become qualified professionals in this field.

The conclusion then is, that the diagnostic processes are not a private domain belonging to only a few. Particularly, those professionals who actually do the day by day work with the child need to understand. Our diagnostic process should also provide understanding for parents and patients as well. The intelligent layperson should be able to grasp an explanation because we are talking about human experience. The disturbed youngster, who may not comprehend it all, will be able to understand a good deal. Sometimes it is a learning process for him as he begins to identify his emotional states. After all, if he is depressed, he certainly has the primary experience to identify.

3. The myth that naming, labeling or cataloging is diagnosis. The issue is differential diagnosis which is the sorting out of specific behaviors for meaning in a more total sense. For example, if one finds this child is aggressive, the questions are: aggressive to what targets, under what conditions, and with what frequency? One would think from the stereotypes sometimes suggested that a youngster was at others 24 hours a day with some super human strength, never stopping to eat or sleep. We may find his aggressiveness rests in a pattern of personal omnipotence: others get in the way of his primary narcissistic expectations. He may be selectively aggressive, even non aggressive to his own primary group members. He may be aggressive only under group intoxication as Redl has indicated, and then to anyone who happens along rather than specific targets. Or aggression may be a role specific behavior expected of him in a particular group. Sometimes aggression is related to frustration: when he can't do the task he becomes aggressive. Or it may be when he is fearful and he hits first to compensate for perceived weakness. Other children are aggressively engaged in what they see as "fair retaliation" for previous wrongs done either at the moment or from the storehouse of a remembered past. Certain "organic" children are high on impulse and low on control and are called aggressive. A boy may be aggressive in modeling after a male image as some boys do in relationship to their fathers. A disturbed child may be psychopathic and not care or feel; he may be paranoid and have justifications within a private system of his own thinking. Some children feel very anxious and guilty about their aggression and others not at all. The symptom of aggressive behavior is a cue for exploration, not an explanation. Nor does this aggressive behavior signify a particular diagnostic syndrome of deviation pattern standing alone.

4. The myth that history or etiology stipulates the pattern or form deviation may take. The search for one to one relationships between given life experience and a consequent behavior pattern has taken us far afield. It is based upon two false premises: first that we can really tell what the psychological forces are from the case history and, second, that two youngsters will react with the same behavior even if the forces were identical. This is attributing a homogeneity to human nature which we know is not accurate. Yet the search goes on and on: rejecting parents produce aggressive offspring. Never depressed and withdrawn? Etiology helps with understanding but provides no easy out or simplified relationship.

5. The myth that symptoms by themselves signify a given intervention. Since one of the four sub aspects of diagnosis is the all important plan of intervention, there is often a desire to short circuit understanding and apply a remedy based upon an isolated symptom. Or even more out of phase, is the common practice of applying one style of remedial procedure regardless of the condition with no differential diagnosis at all.

A careful definition of intervention comes from Rhodes: "An intervention is a mediational process which enters into the variant reciprocity between a child and his world, to affect that reciprocity and to promote a different outcome than would have been expected without such interposing (p. 27, Vol. II, Child Variance)."

Now, if we go back to varieties of aggressive behavior just discussed, there are obviously a huge range of differential interventions possible and some are designed to influence the individual and some the setting. For example, when the behavior is connected to sociopathic pattern, the application of benign but intensive learning theory-behavior modification may be the mode of choice. With the organic child, early recognition of signs of escalating behavior matched with a specific control device may be more useful. For the ego centered, long term socialization will be required, with hard going at times. For the neurotic and troubled, counseling and traditional therapy may be most appropriate. For the youngster who is aggressive because of a faulty identification pattern, it may mean a big brother. The gang aggression will call for group process interventions. We should at the same time, or independently seek all possible external changes which will mitigate the unfortunate aggressive reactions and perhaps even eliminate the behavior at times. For example, some children sense a teacher's dislike for them and are reactively aggressive. Lessons which have meaning and can be done by the youngster reduce the frustration-aggression sequence. A group scapegoat needs a non-hostile peer culture experience. An identification image of an aggressive "fight first" father may not be erased, but a humane and just environmental milieu can help a youngster individuate his behavior. We never told a boy in our therapy camp he didn't need to fight on his home street for self preservation: we proved to him he could survive without it in our setting.

And so it goes. Our general habit is to first shortcut the differential diagnosis and then to totally ignore the correlary, differential interventions. We use a gross plan like a special class, therapy or institutional placement as if it sufficed for an intervention plan when these placements are only administrative frames of reference. They lack the specific psychological criterion we must utilize in fitting intervention and problem.

6. The Janus myth that deviation is either in the child or in the setting. While this myth may provide a topic for conference panels it does not help us understand deviation. Behavior is always interactive and even some of the most deep rooted behavior is mitigated or increased by external conditions. Most behavior is subject to considerable external manipulation. Children thought to have no capacity for self control have sometimes spontaneously discovered new powers of control when they knew the jig was really up. The essential diagnostic

dilemma consists of discovering what behavior is innate and what provoked by the setting which is the contribution of ecological psychology. It is not either or.

7. The myth that socio-emotion deviance is a thing apart from normal experience rather than part of an emotional continuum we all know. Most of us recognize anxiety, hostility, sexual arousal, alienation, depression, pockets of non feeling, autistic like fugues and times of intense preoccupation to mention only a few human conditions. If we recognize deviation as not novel or different from other common based human experiences, we will be able to prevent the dehumanization and depersonalization which so often takes place. We have to guard against personal reactive, panic responses to deviancy by making certain that our behavior is not a reaction formation against the very thing in ourselves we are decrying in the so-called deviate.

8. The myth that mental health is value free. We always imply a model of more acceptable behavior, the way the deviant child should come to be. We do not distinguish between broad cultural mores and desired behavior based upon who is in control. In the present "do your own thing" period it is clear we have gone from over conformity to the place where no one wants to "lay it on a child." There is no purpose to this whole discussion if we are in a total moral vacuum. This means that the school must come to grips with expectations for behavior. Are schools responsible for socialization? Concern for others? How one uses his own talents or violates his own body? Whether a student feels low self esteem, depressed, angry or alienated? All of us need to clarify our value biases.

As we develop our diagnostic schema we must be certain that these myths are not made a part of the processes.

Criteria for Viable Diagnostic Process

As seems patently the case, no set diagnostic system now available has adequate sanction and the multiple utility for which common systems are devised. Since there is no universal solution, it is logical to examine the situation from the point of view of our own needs in education. Thus we are ready to consider the criteria for a diagnostic process which will serve socio-emotionally disturbed children in the education setting. These criteria will lead to the final section, a paradigm for an open diagnostic process.

1. The central purpose of the diagnostic process is to provide understanding of the child's current condition - internal and external - in order to apply appropriate interventions. The term "psychosocial disturbance" should replace emotional disturbance (Prugh, 1969). The central feature of the process will thus be an assessment of the

contemporary condition with equal attention to the state of the child and to his situational stress. This means that the critical issue is not just to know the nature of the youngster and the conditions of his life space, but to be most concerned with the transaction process in each unique matrix. The interface (internal and/or external) is the setting where the dissonance takes place. General theoretical inferences are not adequate, since each "N of 1" constitutes a unique problem to be solved. Diagnosis takes the form of problem solving.

2. The goal of diagnosis is to discover what interventions are indicated. The linkage of "what is" to "what to do" is intrinsic, two sides to the same coin so to speak. Together these will comprise the core of the total diagnostic effort.

3. Etiological conditions will be studied, but at the service of understanding the complexities of the present condition. After all, any of the past which is still active will be seen in the child's present state. What we need are high probability outcome interventions fitted to the complexity of the person. One pupil with low self esteem responds to teacher concern, another to higher peer acceptance, a third to direct concrete achievement which he values and a fourth to any or all of these. Knowing the history often helps to appreciate the contemporary situation but historical information is no end in itself. This changes the type of historical data which is relevant.

4. Because of the gross neglect of implications of normative considerations in the past, the diagnostic process will have to be particularly sensitive to the normative context being applied. Attention is needed on basic human concerns such as level of empathic feeling, anxiety and self esteem rather than the sub cultural artifacts of class behavior or "nice" school behavior.

Because children and adolescents are growing and ever changing, and this at particular individual rates, there is not only the matter of cultural norms but also age level norms and growth patterns to consider. This does not suggest that mean or average performance on any set of developmental norms is to be expected of every child but that some reference to the general growth grid must be considered. The individualized pattern of the child's growth is more critical than age level norms. In the area of emotional growth, developmental tasks generally accomplished at a given time are useful reference points.

5. Screening is an essential first process for the educational enterprise. We need to know the mental health status of the total group, locate the vulnerable and make diagnostic studies of those who appear in need of such further work. The school is the only professionally staffed institution seeing all children over long periods of time and must engage in screening. Diagnosis is layered process. It has often been said that educators should screen, that

is nominate children for diagnostic study. Rather we should think of screening as a first step conducted by any of the mental health professions though the school is a logical setting for screening enterprises.

6. Differential diagnosis cannot be allowed to become an end in itself but is conducted to insure that the intervention is based upon the best understanding possible. It is not desirable to extend the diagnosis ad nauseam until it becomes a substitute for intervention. Those who have the primary responsibility for specialized diagnosis, especially the guilds, must be participant members of the educational team and not apart from the total purpose. They provide a service to the team study of the child. While we must have the special expertise, this expertise must lend itself to common needs.

7. In the interest of humanistic concern for the youngster, every effort will be made to collate pertinent information from all spheres of the individual's being, his physical-neurological, psychological-perceptual and his reactive-behavioral. To protect him, we will need to assemble a broad spectrum of information from multi disciplines. As the main purpose is to help a disturbed child, it is inconceivable that he should not be participant in all of the processes and findings to the limit of his ability. After all, the youngster's maximum involvement is essential for change. Since children are one with their supporting matrix, family or family surrogate members are to be included. When the problem is centered on another child, a group or the teacher, such relevant persons must be involved in any problem solving.

8. Labels and categories, used as they now are, have little common meaning to the many who are involved with socio-emotionally disturbed children in the educational setting. Labels can also encourage certain self perceptions and certain reactions from others which lend themselves to the self fulfilling prophecy. Every effort will be made in the diagnostic program proposed to play down categories and labels even in the face of the fact that most aid is still being given categorically. Designations are not only a professional problem. In an interesting study (Wolfensberger & Kurtz, 1974) parents of retarded were asked what labels they had heard and what were appropriate for retarded children. The responses reflect irrational and emotionally based attitudes. No labels were really acceptable for their own children, though a term might be considered appropriate in general. Parents reject terms which are negative in social desirability and which imply maladies, in spite of the fact of their ability to accurately indicate the level at which their child functions.

Children are responsive to "being upset" and empathic youngsters are well aware of the emotional status of those about them. They may reach out to them on one hand or scapegoat them on the other. They attempt to explain behavior by use of such terms as "dumb," "something

is the matter with him," or "with his mind," and use such terms as "crazy, psycho or nuts." There is often a combination of curiosity, fear and isolation on the part of peers.

In place of labels, we will seek information about important dimensions of human functioning as these are demonstrated in various settings. This will not eliminate our diagnostic problems nor replace the problem of understanding the child as a total functioning organism, but it will orient us to the contemporary condition. Clues for treatment will be sought in these psychological particulars.

If we consider diagnosis as plotting dimensions on continua rather than categorization, we will be much further ahead though we must still be aware of the situation-specific context. The idea is not new. Among those proposing this was Rabinovitch (1968) who used the following dimensions for assessment of learning-problems: General intelligence, special senses, neurological status, symbolization skills, emotional freedom to learn, motivation and opportunity to learn. In clinical practice he has used ten dimensions: neurological integration, intellectual potential, intellectual functioning, clarity of ego boundaries, capacity for depth relations, acculturation, anxiety (exogenous and endogenous), motivation and self esteem. What results is a profile which enables us to think more specifically about the important aspects of the present status of a disturbed youngster.

Eysnck (et al.) has proposed three main dimensions: extraversion-introversion, neuroticism (emotionality, anxiety and liability) and psychoticism. These dimensions, as those of Rabinovitch, can be applied to assessment of normals as well as extremes or deviates. There are of course many lists of dimensions. The critical thing is to make certain what we are compiling will give cues to basic patterns and not just isolated phenomena. The information has to add up to something about the whole child.

9. We will not be content with just a profile or a listing. We will want to discover the pattern of the self without at the same time implying neat categories or labels. I can remember well the cases which used to be presented in training clinics for teachers at a nearby mental health facility. Over the years the same cases were presented: the drooling schizophrenic teacher, an empty teenager, the paranoid old man and so on. I asked one of the staff why they always exhibited the same series of cases. The answer was they were the "pure" examples of the conditions they wished to describe. It was very hard to find "good" (true to stereotype) examples of the various types of pathology. With children it is even harder to find classic examples. Only by ignoring certain parts of their affect can one find many who fit any label.

There is another level of generalization which does not imply stereotyped uniformity and yet attempts to summarize the profile. These are broad patterns. There are always predominate aspects to a child's behavior. From this we can tell how the whole personality hangs together, but this does not imply a set list of specifics. Also, there is little uniform "purity" which reads like the textbook cases. The non feeling and non caring child almost always does care sometimes. The anxious child can be expected to have periods of quiet. But it does help our diagnosis to conceptualize general organization if we forgo the desire to make neat packages.

When we look at the overall divisions of deviation from both a current and etiological basis, major patterns emerge which have meaning for educators (Cruickshank, in press & Morse, 1971). There is the "unfinished" syndrome, youngsters who have grown up under primitive socialization conditions. They never had the humanizing influences children require. These youngsters range from the Tom Sawyer impulsive free souls to the socio and psychopathic personalities. They find regimentation difficult, conformity a bore and in extreme cases live in the narcissism of their own impulses regardless of others. The basic thing is that without internal anxiety, the conflict is not internal but external, with the social contacts about them. They may have worry about getting caught, but not have guilt about their behavior. Their value conflict may show primarily in rejection of societies major socializing and demanding force, the school. (Stinchcombe, 1964). It is interesting that more attention is finally being paid to this type of problem. For example, a new book by Lion (1974) deals more with the antisocial, aggressive personality problems than is common and covers diagnosis, classification and treatment. The primary thing for the schools to recognize is that there are more and more children in this society who come to school without being equipped to respond as in the good old days when we could count on acceptance of the social expectations. We are now in the position of creating values rather than utilizing a state of readiness. Such children get into major conflicts with the school and are often rejected and ejected when they need a "second home" to help them develop. Of course, there is resistance to school which is well reasoned and sophisticated and considered and this should not be taken for the primitive responses about which we speak. The problem of the undersocialized is in the nature and level of their values and their relative lack of empathic concern. These youngsters have at times been called the personality or character disorders. The total reconstruction, or if you will, construction needed for adequate social behavior will tax any complete therapeutic effort let alone what the average school can provide.

The neurotic youngsters are beset by internalized conflict. They are struggling with their feelings and have anxiety and guilt at some level. Impulsive acting out behavior is as common as depression, so

behavior alone is not the index. They are often "seem alikes" for the social deviates just discussed. The issue with the neurotic youngsters is how to help them deal with deep and profound emotions such as hate, guilt, anger, depression. Most of them feel inadequate to meet the demands. Their inability to cope leads to a poor self concept and low self esteem. It should be obvious that any of the special education categories have more of such problems to face than the child within the normal range. Being different itself is considered a sin in our society unless the difference is super normal and even here there are problems. While any special education youngster like any other youngster can be raised a psychopath, it is more likely that the sense of being different and being either rejected or overprotected will lead neurotic problems, especially difficulties with self esteem. The organic child frequently blames himself, and considers he has done something bad to be given such a problem as he has, the nature of which he usually does not understand. In a follow-up study in process, the severe dyslexics now adults had each and everyone built up massive defenses to avoid the reality of their limitations. The mildly retarded knows he is missing out. He usually labels himself even before others in the peer culture do.

It is probable that, in the children within the general neurotic gestalt, the number of depressed youngsters is underestimated. Once a fifth grader said to me, "By the third grade you know if your going to make it or not." There is a loss of hope and a feeling of a bad future. Some depressed youngsters even see the good things which do happen to them as mistakes. A teacher had told one youngster that he could do the work but, he said to me, "She is dumb too. She doesn't even know how stupid I am." Good grades were considered mistakes. The neurotic category is a large one and fortunately, given proper assistance, their prognosis is favorable. But that does not imply that remediation is easy.

The psychotic children, which comprise a very small group, are those so severely disturbed that they lack the capacity to judge reality, live in a world of their own making, and do not relate to others. There is a maturational lag in motor, intellectual and social functioning. Deep underlying anxiety is pervasive. Interests are narrowed and often repetitive. Identity is confused or lacking. Language is almost always affected. Behavior ranges from self destructive, screaming and temper tantrum responses to passive haunted isolation (Stoecker, 1972 and Wing, 1972). There are also children where the diagnostic condition is never certain with the possibility of severe retardation, brain injury and autism is various combinations. The form deviation takes is always changing in response to the society and the evolution of new stresses and strains. One sees these societal reflections especially at the youth level: when the myth of constant progress through science ceased to maintain and hold together the society, there was the loss of hope and belief ones' power and influence, an alienation and a search for instant happiness by drugs. These were the manifestations suited to

the time and consequent to societal woes. Anti rationalism brought a surge of mysticism and fascination with the occult: the stars control our destiny because it is obvious we don't.

Such depressed conditions are based less upon the individual's case history than his projected outlook. It is not that these youngsters have had distorted families or the usual conditions thought to cause depression. How can the young have hope when the culture seems doomed? Despair is not new: only its form and context are different. Society is rotten. Government is a cheat. These conditions can well generate anger and aggression as well as despair. Also the lack of any accepted behavior norms undermines the moral sanctions. There are those youngsters who would right the wrongs instantly with bombs. Others would "rip off" their personal welfare. Some give up. We see an anti repression mode shown in language, sex and confrontation which is certainly deviate from the last generation.

All of this is a vast socio-psycho-political complex, only mentioned here, to remind us that there is no diagnosis apart from the times. And it requires differential diagnosis to comprehend the nuances of why a youngster behaves as he does because there is also the possibility of simulated surface behavior being a cover for a fundamental character problem or a neurotic nature. Sexual exploitation and sexual acting out to solve other personal problems is just as true today as is the practice of sexual freedom as part of some brave new world. As Brunner has pointed out, sex is less likely to be the source of neurosis and conflict than work for the next generation. And school is a synonym for work and effort!

Special education has never been on the vanguard of understanding or dealing with deviation, unless it was IQ or physical. Yet the society has its major problem in psychological deviation. As an upbringing institution, the school tries to conserve the past, resulting in a tendency toward the ossification of norms. Being responsive to a fractured public but nonetheless a public more past than present or future oriented, it struggles with these matters. The struggles show up primarily in discipline codes, rules and the covert codes which define the base from which deviation is noted. In a changing society, this requires constant concern and understanding and much discussion in order to provide a reasonable, flexible environment for the young. Otherwise, the school becomes a primary producer of socio-emotional deviance.

The matters just reviewed lead us to diagnostic process geared to the individual, how he has evolved, what his contemporary affective states are, the social press of his life and what he sees happening to him in the years ahead. Categories do not summarize the information needed to plan for each "N of 1", but the recognition of the underlying dynamic pattern provides a synthesis for the information we collect.

The Open Process for Diagnosing Socio-emotional Impairment in the Educational Setting

In this final section, the various aspects of diagnosis so far reviewed will be incorporated in a plan useful for both screening and diagnosis. We are concerned about the same aspects of the person in both instances. While the orientation is education, the system is applicable to any mental health field.

It would be naive to propose a novel diagnostic system with an assumption that at last there is to be a design with universal appeal. Rather than that, the open process system is proposed to facilitate the new educational accountability. This system has evolved from efforts with colleagues in the field to find more appropriate ways to assess and plan. It is not categorical, so the counters and tabulators will be dissatisfied. It is not neat and thus the compulsives will not be content. While it is theory related it is not theory bound and eclecticism is in bad repute today. Coming, as it does, out of pragmatic efforts to assist the emotionally disturbed children in educational settings, it has an action focus. The utilization of this method of problem solving is of course not above the talents of those engaged in the effort. Always touching base about issues of concern in this paper, we are continually trying to sharpen our wits and our human sensitivity. The goal is to provide the most complete and objective plan for the youngster based upon a comprehension of the whole of the child and his surround. To guard against covert application of undefined norms, decisions based on unbalanced data, theoretical biases, words without substance and so on is a never ending task. One of the most difficult processes seems to be the conversion of descriptive statements into psychological meaning. It is easy to say, "someone should work with him," but difficult to define exactly what the psychological process is that constitutes the "work."

The diagnostic paradigm offered is a schema for compiling information about an interactive system. It will be presented in outline form and elaborated. Through this method we can keep matters in perspective realizing that no child is 100% disturbed 100% of the time.

The basis for the model is the child and his nature and the social forces. There will be many ways of ascertaining information and much interchange to provide understanding. Children, being naive about formal mental health routines, often give information about themselves regardless of the accepted role of the person who is at the receiving end. All professionals are given credit for concern about the whole child. It is inconceivable that a teacher is not interested in the fantasy of a child or a psychiatrist in his achievement. How will we know the child if we only view him as segmented? Case conferences often assemble a mosaic by trying to put together isolated pieces of information which each separate role operator brings. While it is

138/139

Figure 1
A PARADIGM FOR OPEN SYSTEM OF DIAGNOSIS

Areas of Concern	I Assessment of Current Condition (see Fig. 2)	II Relevant Etiological Factors	III Goals Long) Term Short)	IV Intervention Processes Tried Proposed	V Evaluation Long) Term Short)
<p>A. <u>Self Status</u> Self concept Self esteem Emotional state Values - character Empathic potential Reality testing</p> <p>B. <u>Biological Aspects</u> Growth patterns Traumas Neurological conditions Nature and impact of special disabilities</p> <p>C. <u>Social Relationship</u> Peer Group role Authority Family role</p> <p>D. <u>Academic</u> Attitudes toward school, learning, etc. Cognitive processes Achievement</p>	<p>Specific behavior in these areas with which the teacher, school, home, etc. must cope.</p>	<p>Selective historical information which illuminates and clarifies the current state: developmental age norms, life stress, disabilities, early experiences, relation of growth to, etc.</p>	<p>Immediate and long term goals for school and elsewhere in child's life.</p>	<p>What has already been tried? How well did it work? Why? What new psychological approaches are needed? Who will be responsible? Specifically what will be done?</p>	<p>Regular re-evaluation of status related to long and short term goals.</p>

evident that there will be differential data from various professional sources, this should suggest a series of different children. There is only one child, whoever discusses him, whatever the data.

The schematic outline for diagnosis is presented in Fig. 1. On the chart, the "N of 1" study will be concerned with basic matters, the status of the self, biological conditions, social relationships and the academic area. Our attention in each area is centered around the current state of affairs; as explained, history can help elucidate the present condition. Then it is necessary to setup goals with related interventions. The grid is completed with evaluation.

In some instances, one can think of the chart as a profile, and the conditions under examination to be dimensions. This is particularly true of the self status material where a dimension from high to low self esteem is predicated. At least a summary of the findings in certain areas could be considered on a profile basis. However, the significance of a position on a scale must be seen in relationship to other information. For example, high self esteem in a psychopathic configuration does not have the same significance as high self esteem in a child with a mild anxiety situation. A profile nonetheless escapes the deadend of categorical classification. (See Figure 1.)

As can be seen the whole process focuses on Col. I, the Current Condition. The other columns take their meaning from their relationship to the child's situation at the present time. Because of the critical importance of this column, it is further elaborated in Figure 2.

Figure 2

I Assessment of Current Condition			
Problematic Condition		Potential Resources	
Personal Behavior	Stress Forces	Positive Personal Attributes	External Support Forces

This detail calls for balanced attention to both the negative conditions and the possibility of generating counteracting resources within the individual and his setting. The interest is in both the continuity and pervasiveness of the behavior in question. A youngster may be aggressive everywhere or just in school, or in some classes and not others. The interface of the interaction draws our attention.

So often we work out interventions without looking at the resources a child may have. Intellectual capability is one asset verified by research. A hopeful disposition, a desire to modify one's behavior, an area of possible interest or talent, such things are important. We can never ignore the positive and negative images the youngster has before him in the family, peer group and neighborhood for his identification. A potential delinquent with a delinquent father and older brother is likely to be very high risk. On the converse, there may be individuals who can present a meaningful life style who are available someplace in the child's milieu if we can but activate it. Fortunately, a supportive influence whether intrapersonal or physical, does not have to be perfect to embody a potential resource. The child's individual competence, the objective of therapeutic interventions, is a consequence of capacity to cope with the developmental tasks. This in turn depends upon the resources the child has for adaptation at each life stage. The psychology of coping and the nature of the person-environment fit is a recent way of considering mental health problems in a work Coelho and others (1974).

Everything studied in a diagnostic process should feed into the total understanding of the current interaction and so it is with II, Relevant Etiology. Sometimes the history is necessary to appreciate the real significance of given behavior. Here one must guard against the use of theory to supply explanations in the absence of direct information. For example, "He was unresponsive to in the first three months and he must be a psychopath." In matter of fact, we are most interested in the perception of case history events, by the child and others. The adequacy of a family is not found in our judgment of its functioning but in how it actually effects the youngster. It may be only too apparent to ascertain his view or again his perception may be masked and hard to discern.

The place of age level functioning and disability conditions is brought to bear in etiology. A baby is expected to be totally distraught one minute and laughing the next. The explanations a young child gives are often "irrational" but not because of thinking process disorders. The depression of thwarted love in an adolescent, so serious and real to the individual, one still expects will be lived through. Those professionals who have worked only with pathology sometimes see "sickness" in everything but their own behavior. In the process of developmental growth the child always reaches into the unexplored. Without the knowledge of typical age related behavior,

what is essentially normal can be seen as disturbed. For example, much of the cross sexual exploration at various ages of the retarded and disturbed children is normal. Even clinicians sometimes see any interest in sex as pathological when the opposite is really the case. An adolescent not interested in the opposite sex was (at least until rather recently) considered atypical on that basis alone.

What are reasonable for goals, to establish in category III? Carl Fenichel once pointed out that a goal is relative to the condition, not to some theoretical expectation. To keep a child out of a back ward in a state hospital, to minimize or prevent the need for institutional care, to get him ready to take advantage of a special class, to return him to the mainstream - any goal can be reasonable under particular circumstances. Mitigation of behavior so that the individual can find a more normal life experience may be all we can really do. A schizophrenic youngster who has exceptional mathematical talent may be provided a way to work into a useful social role, though he has not been cured. Of course not all children will become part of the "mainstream" though we should do all we can to enable the maximum self fulfillment to take place.

But it has been demonstrated that long term global goals are not enough to help disturbed youngsters. Rather than asking him to "be normal," we need to lock in on specifics as the behaviorists have demonstrated. We have specific goals and even day by day sub goals designed to move ahead. The evidence of improvement to the self of the improver is one of the most highly motivating forces not only for the child but for those professionals helping him as well. Incidentally, one good day may make a child think he has learned to cope with anything forever in this day of instant everything.

When it comes to environmental factors, there are severe limits to the power most professionals have. Perhaps we can alter the family stress somewhat though not much. The mother may never be able to meet all the expectations but, through support, is less overwhelmed. We will not homogenize all people into an ideal image. But perhaps we can relieve the point of pressure to permit the child's growth potentials to flower a bit. People, even professional people, do change. Here again goals may be more modest than we would like. On the other hand, we can often alleviate the point of abrasion by simple handling changes and thus we may reduce some stress provoked behavior. A youngster may survive on less change than we would want for him.

At this point it is evident that IV, Design of Interventions, cannot be related to symptoms in a vacuum. This is really the value of differential diagnosis. He steals so we have him write on the board one hundred times he shouldn't steal. We provide psychotherapy. We punish. We give him what he tried to steal. And on and on. What we do depends upon the psychological reasons why he has done what he has done, not the symptom. As Weaver has said (1959), "Sometimes even

stealing is for love." But it can also be for hate. In trying to alter aggressive behavior of disturbed children we found with some, who could feel for others, a counseling talk led to rather rapid alteration of behavior. They had not appreciated what they were doing and already had values which did not substantiate such action toward their peers. Others wanted to stop, and were upset by the fact they couldn't because they also did not accept the behavior as right. They needed a variety of interventions beyond talk to enable them to deal with their own impulsivity. A third group couldn't care less. Hedonistic and psychopathic, they were deviate in values. A combination of surveillance, reward and restriction plus a long term effort to build positive identification constituted the uphill, hard work, low return program for them. To each person his own intervention rather than to each symptom a given intervention.

It should be apparent too that, in addition to long term restorative efforts, we are looking for short term crisis interventions to bring unacceptable conditions back to a tolerable level. We use short term exclusions, diversions and change of press to meet the daily grind. Life Space Interviewing is a critical asset. The Crisis Teacher program is designed to drain out the immediate acid so that life can go on (Long, 1971). Since these behaviors are often symptomatic of a chronic condition which has to be altered, surface intervention is not necessarily a solution. Redl once wrote on what to do until the therapist comes - which is to say what to do most of the time. We are bound to consider the whole child's needs. We meet his attention getting behavior by one tactic; we must not stop there if he also needs deep human acceptance, self substantiation. Because he now sits in his seat instead of pushing all the time for attention, he gets less relationship from the teacher. Most children who need human response will take negative responses from a person rather than get no response at all.

A very careful examination of the current efforts at intervention whether planned or happenstance are part of Stage III. Here again the behaviorists have demonstrated how often our intentions are not matched by what we actually do as change agents. We actually encourage behavior we wish to eliminate because we do not examine the real learning our tactic fosters. There are youngsters who uncovered "instant ego strength" when they found out the jig was up. They hadn't changed basically but they did show a new aspect of their nature.

The fact is, service or interventions are often provided on the basis of what we had available rather than on what is specifically needed. Cowan (1974) has reinforced the recognition of the essential problem pointed out by a number of workers. He finds that the best bets for early detection and remediation in his program are young children in the first grade, from good SES backgrounds, from suburbia with mild initial problems relating to shyness, withdrawal and under socialization. The reverse prognosis tends to be true for third graders with low SES,

urban backgrounds and more serious acting out problems. What this underlines is that the greater the total change anticipated by the interventions, the more the need to expand the universe of things changed to effect an alteration. This is in reversal of what we actually do.

For a comprehensive and systematic discussion of the variety of interventions, the reader is referred to a chapter in Rhodes (Rhodes, Cheney & Morse, op. cit.) book. It is well to keep in mind the wide variety of interventions which can be employed and to review from time to time these possibilities versus the limited actions which are actually being utilized in most settings.

Evaluation, V, is a most necessary and deceptive column. In this day of program planned budgets, the first question is what is the outcome? What have you produced? There are deceptions along the way which all for caution as have been outlined in Conflict in the Classroom (Long, 1971). The evaluation must take into account the whole life experience and not just the brief segment where we intervene. External to our efforts are many positive and negative life events which often have far greater impact than what we have done in the name of mental health. Again, using the "N of 1" technology with due attention to external events, it is possible to work on this problem. One of the most vexing things is that we often do not know what the real psychological impact has been, even in our designed interventions. Since most methods involve people in one way or another, the non verbal communications may mean more than the actions we tabulate. Nonetheless, the discipline resulting from careful evaluation of efforts is necessary for any viable program.

If we are serious, really serious, about the individual through the "N of 1" approach in diagnosis, we need attend two features. One is the matter we have been discussing, namely the description of the condition at the time we are making decisions. This requires what is traditionally recognized as reflections of differences between individuals. This is what we have called differential diagnosis. Carver (1974) points out that we need also what he calls "edumetric" data, reflecting within individual growth, which is essential for appreciating any change or evaluation. While he is discussing achievement gain problems in the educational setting, the same problem with gains holds true for affective behavior as well. We need to be aware that tests commonly used in differential diagnosis are not designed with a primary purpose of high sensitivity to change within the individual. This is one of the several reasons why follow-up research is in such a poor state.

Areas of Concern

So far a series of tasks, somewhat altered from the classical list of four indicated earlier, have been presented as a pattern for diagnosis. The basis is the current condition but included are relevant etiological factors, goals, interventions and evaluation. It remains to consider what substance should be included in the diagnostic process.

To protect the viability of the outcome, we attempt to find out as much as we can from a wide variety of sources and settings. The actual sources of information are: (1) the child; (2) those who have considerable contact with him - friends, siblings, parents, teachers, etc.; (3) those who have special diagnostic skills ranging from the teacher in that particular role, to the child psychiatrist, neurologist, psychologist, social worker and possibly others - sociologists, anthropologists, psychiatric nurses, guidance workers, and so on. As the paradigm indicates, we need to examine behavior in various settings, not just the office, the classroom, the neighborhood or the home, but in all.

The child himself is the primary generator of information whether he speaks in parables, demonstrates by his behavior in special settings, fills out test items or answers our questions as well as he can. He provides information on his state. Sorting out defenses, things said because he thinks he should and things unsaid because they are too little understood or too frightening makes the interviewing skill essential. Unfortunately, too little is said about engendering trust which must underlie work with the child as a direct data source. To a perceptual psychologist, no effort is too much to spend in finding out how the world looks to the individual being considered as possibly deviant. To accomplish this ongoing clarification of the child's perceptual world viz a viz the life events we share, the technique of Life Space Interviewing has been evolved. (Long, 1971.) This interviewing is sometimes referred to as diagnosis "on the hoof" for it is a continuous process which deals with the interface between self and outside and with coping strategies as well as information about the events.

An important reason for flexibility in the roles of various disciplines is that children are seldom respectors of the functions assigned mental health personnel. Many also tend to explain themselves around living situations and may confide more to those they know best. This is why Life Space Interviewing skill is so critical in diagnostic work. On the other hand, there are also youngsters who cannot integrate their expression and need the help of a most gifted clinician to put together, from bits and pieces, what is back of it all. Such skill is especially required when the child is constricted in communication. Gardner (1971) and Goodman (1972) have discussed ways to deal with communication difficulties. The lack of clarity about the child's inner life is also why various projective assessments are needed at

times. Expression in symbolic form may be all the youngster can give. Unfortunately it is rare indeed that we have represented in the diagnosis the variety and balance of professionals and lay persons needed to provide the breadth and objectivity needed for a thorough, true and total understanding of the child's situation. No wonder he needs an ombudsman especially when the diagnostic process is kept to a few persons, often with strong biases and special methodology.

The data gathering procedures are well known and include the interview (psychiatric and life space), many face evident scales and measures as well as projective devices. To this can be added codified and general observations, especially of the unobtrusive types. In fact with legal restrictions and rights to privacy, unobtrusive measures will no doubt see increasing use (Webb, et al., 1966). But it is one thing to gather data and another to make sense of the information. The old style case conference tended to be the dance of the roles, recitations and power politics. It would take us far afield to examine the group dynamics of this particular style of "problem solving" in any detail. Often the only problem solved was who had the power of decision. We know there are two matrices in case conferences: one is that role status; the other is the personal characteristics of each set of specific people involved. There is continual need to monitor the group process by which decisions are made in light of group dynamic interplay.

But nothing comes by magic. Understanding another human being is never complete at best. It is interesting to see how the current legal rights of parents (and children) to be present have upset some professionals. We are afraid to have our ideas exposed and we do not know how to make nonperjorative statements to the human beings most involved of all. We now know we need to use methods and language which can be justified in open exchange with lay persons as well as professionals.

While diagnostic processes could consume our whole energy, there are two important principles which serve to reduce the time. First, we start with the problem situation as it has become evident in the current interaction system. We concentrate on the actual elements with which we have to deal, rather than attempt exhaustive data collection on every possible area, which so often becomes an end in itself. The extension of diagnostic work from the information already known is proposed as it is needed to get a complete picture. In some instances the needed assessment will be comprehensive and in others segmented. Another principle is not to overkill with data when the problem is already satisfactorily understood. There are times we have more than enough evidence to plan and only minimum verification of a formal type may be in order. At other times the messages we have assembled are mixed and confusing and it is difficult with all the techniques and professional skills to make a differential diagnosis for planning. Diagnosis is an ongoing process of understanding not a set ritual or rite to be performed the same way on every "case."

In a most stimulating article by Evans and Nelson (1974), many of these questions about diagnosis are discussed. "The methods by which behavioral excesses, deficits, and assets of the patient are precisely ascertained can be broken down into two major groups: (a) interviewing and (b) the observation of behavior (p. 601)."

They propose alternatives to typical testing. Starting with the single-subject research of the behaviorists, they put high priority on observation of behavior for baseline purposes, but observation in as many variant settings as possible. When we collect the "observations" of teachers, peers and parents, this is the aim although it is clear that the validity and reliability is often in question. What may look like situational variance may be observer distortion.

When it comes to the interview, these authors propose, in addition to the use of accepted interviewing techniques, the attention to the content of the interview. That is to say more on the what and less on the how. Here the use of time savers such as schedules and check sheets will make certain the relevant items are covered. There are some general resources for instruments from the clinical as well as the more specific purpose devices. A recent publication deals with procedures and devices for use with young children and covers attitudes, behavior traits, social skills and self concept (Walker, 1973). This age of vital concern to educators presents special problems in assessment.

For the broad range of scales, both Johnson and Bommarito (1971) and Robinson and Shaver (1969) are useful. Most of the areas in the diagram of Figure 1 are covered in these volumes. The Johnson work covers measures of cognitive processes, personality, and emotional states, how the child perceives his environment, self concept, family environment, motor-sensory (brain injury), physical attributes, social behavior and other attitudes. It is a tremendous source for screening and assessment devices. Robinson deals with scales of life satisfaction and happiness, measures of self esteem and related constructs, alienation, authoritarianism, socio-political attitudes, values and attitudes toward people as well as religious attitudes. New devices are being developed all the time, though seldom with the precesses needed for either adequate reliability or validity checks, and some for very specific purposes: a most recent source is a taxonomy of data collecting devices prepared for NIMH. Every possible topic in mental health is examined, and due attention is given to children and educational aspects (Comrey, Bacher, & Glasser, 1973). As for the many clinical measures, projective and other, various psychologists have devices which they consider most productive. Unfortunately some of the popular methods have limitations especially with young children, though the work of Wolman (1965), Murstein (1965), and Beller (1962) do include work with youngsters.

As was mentioned in prior pages there are now standardized procedures for dealing with environmental press just as with individual states. Hopefully, some day the devices of Mercer and Moos will be as commonly used as the Bender and Draw-A-Family. We are interested in both the perception of the child and his environment and in normative information about the actual character of that environment. The purpose is not to refute the youngster if he says school is terrible and the Moos scale indicates a positive school environment. But it does tell us that he distorts reality and indicates something about his perceptual style. In fact, discrepancy information about any condition is very useful (intelligence, social acceptance, etc.), where what the child perceives and what the actual condition is differ widely.

The four headings, Self Status, Biological Aspects, Social Relationships, and Academic provide information in the major functioning areas for youngsters. School is put last in order to encourage those of us in education to remember school is not the be all and end all of the child's life. Of course, with different children, any one or another sphere may reveal the core condition of his difficulties. Some are disturbed in all four broad areas.

Category A is the assessment of the state of the self, with six primary divisions: the self concept, level of self esteem, emotional state, value and character development and finally, his empathic potential and his level of reality perception. There is no magic in these six dimensions, but they are proposed as critical in any diagnostic assessment, comprising the core around which many other aspects revolve. The self concept is the essence of the individual, what he sees himself to be. There are usually several layers - what he publically admits as himself or his overt self, an ideal self or what he would like to be, a private or covert self which he shares only with those he trusts but which can be recognized, and finally an unstructured self, recognized from behavior, and projective devices but not necessarily from the individual's own awareness. Unfortunately most scales now available mix up parts of all of these, and add in self esteem to further compound the matter. Self esteem is how one feels about the self he is, ranging from being very satisfied to most negative. Not all of this functions at the conscious level either. Often, especially in schools with a traditional view of the "good self", the individual who is maladjusted is seen automatically as having low self esteem. Actually, a delinquent or sociopath may think very well of a self we might judge as poor. Since most instruments do not differentiate these two aspects of self, we can make some ridiculous ex cathedra judgments about how the child feels about what we see as a "bad" self. On the reverse, some children feel they have a bad self when the external evaluation would not suggest this to be true at all.

The sources of information about the self range from tests such as the Coopersmith, Bower-Lambert, and many others (Conflict, op. cit.) to inferences from projective devices, drawings and responses to pictures. The interview is also a way to explore this matter. The main diagnostic issue is to make certain that one is down to the real self esteem and not a convenient defense or pretense to cover up a painfully low self evaluation. Incidentally, as in the Bower-Lambert device, self concept is an important area for mental health screening of the whole school population.

The autistic child is said to lack any sense of self or identity. He is not even aware of his physical body and the boundaries of what is his own organism. His drawings may reflect dissociated parts of bodies or distorted proportions.

Next it is important to assess the emotional state of the child. What major affective dispositions are welling up in the youngster? If we look far enough in any of us, one presumes the emotional caldron of which Freud spoke. But what we are interested in is not only what underlies the defenses, but what is the balance between basic emotional feeling and ego controls. We see some "tight" individuals with strong emotions and equally strong management which we call over controlled children. On the other hand there are children so anxious they are continually beset, or so angry they are always ready to strike out. Children have intense feeling states which may pervade their whole system. Just as critical is the child without feelings or no appropriate feelings. There are bland, unconcerned youngsters who live only on the surface. There are scales in the sources mentioned above to assess such emotional states. Again projective tests are frequently required to get beyond denial. Interviewing is usually necessary. Of course one does not wish to "open up" a youngster's emotional innards in an interview without also being able to put his defenses in order again. Finding out how you really feel can do some terrible things to an individual. Skillful interviewers do not require a verbal admission or even let a child reveal certain things in a diagnostic process. There is always the sealing over to help a child until a program of assistance can be provided. Many psychotic youngsters appear to be laden with fear as if disaster were at every step. Others have a vacant stare, or express feelings inappropriate to the situation. Sometimes drawings indicate a state of great hostility with destruction all around.

This diagnostic process also includes the exploration of the child's thoughts about help and possible interventions. Unfortunately more things are done to children than with them. Likewise interventions are proposed by specialists for families rather than explored with them. Diagnosis, which in our terms includes the plan for help, is obviously the first step in treatment. Today, more than ever, the exploration of values and character structure is essential in diagnostic work. This is due to the fact that one's motivational system is

generated by the values one holds. For example, differential diagnosis requires a recognition of the motivational basis for behavior. The instrument source references previously indicated are a source of devices and the interview and projective devices provide information as well. What does the person really care about? The hedonistic and narcissistic patterns often have investment at all in school or work. The increasing self destructive aspect of some the adolescents on drugs makes it clear that there is a basic characterlogic component. There are youngsters who justify their behavior on the basis of "I feel like it." Some have become lost in a culture which lacks any clear articulation of a set of values. Others have worked out their priorities as Stinchcomb found - sex, money and automobiles. When we find this condition, we are aware that the interventions needed to change basic identification are very difficult to provide.

The opposite end of the value continuum is just beginning to get attention. Altruistic and empathic attitudes are also present in many children. Some children care about others even though they act as if they do not at times. They are empathic with others and have a highly cultivated social sense. Unfortunately caring, in a mixed up youngster, does not mean behaving that way. They may drive parents, siblings, peers and teachers up the proverbial wall, with their behavior they suffer inside for their deeds. For them the interventions are not sought in identification or character building but in more traditional therapeutic restructuring of ideas which have produced the conflict.

The final scale in the personal section is that of reality testing. After all, the child who sees it like it really is has a good chance of responding to corrective influences in the life milieu. But if reality is distorted, messages are contorted. We are speaking here of what the child really believes, and not casual defensive statements. In Life Space Interviews his inaccurate statements about the world around him are challenged and probed until we can see how it really is with him. Some children see the world as against them while others use this to defend their actions. The paranoidish tinge of many youngsters defies the possibility of certain people being a "good" influence in their eyes. The cues for reality testing can come from scales, tests, interviews and observations of behavior.

Psychotic children both ignore and distort reality. A schizophrenic child who could not swim started walking out in the water and would have continued to walk in over his head had he not been rescued. The uncertainty about reality - always asking, asking even repeatedly about the same thing - is noted in many seriously disturbed children. The nature and level of reality testing is a critical dimension in the diagnostic profile.

Category B, Biological Aspects, focuses our attention on the physical body and body history. The studies of infant and child malnutrition as related to intellectual and academic deficiency as well as the work on basic temperament referred to previously have sharpened the awareness of the need for a complete medical and neurological study whenever there is the slightest possibility that such factors are entering into the pattern. There are variant growth patterns which characterize a family. Possible pre and post birth trauma are considered. It is a sad fact that few children are given a good neurological examination even when it is indicated for differential diagnosis. Simple observations concerning a child's awkward walking and lack of motor coordination may be ignored, even when obvious. While some evidence can be deduced from performance on psychological tests or behavior rating scales, to say nothing of the child's own writing and playing, the object of this section of diagnosis is to know the soma as a functioning organism in its own right. The medical-neurological examination, especially in the case of subtle conditions, is essential. Again, how the child feels about his physical habitus is a major part of our quest. What does it mean to him to be little or big, handsome or homely, coordinated or dysplastic? If physical attributes can have the potency in affective conditions that one finds in adolescents, it certainly must be reckoned with in diagnosis.

We are of course as special educators particularly interested in the impact of any special education disabilities on the individual. As was indicated, the literature is less than revealing on this matter, though the reason should be clear. The disability is a liability but not a specific producer of a given deviation. But the way a given youngster thinks about his disability, and the way those about him reflect on it will obviously have profound effects.

Area C is that of Social Relationships, a key area for any youngster's diagnosis. In fact, the major source of referrals comes from failure to meet expected or necessary standards of social behavior. It is a prime diagnostic index. First is the peer (and cross sex) relationships relative to the child's level of maturation. What group role does he think he has and what do others see him having? There are many observational methods, interview data and of course sociometric and role study devices which provide information on these dimensions. If he is an isolate or scapegoat in school, does he have friends outside of school? Perhaps he is a delinquent leader or a provocateur, with high social competency but used in ways which cannot be tolerated.

The child's relationship to various authority figures reveals a great deal, especially in the similarities or dissimilarities between home and school. Some are dependent and fearful and some hostile and negative. Some independent and self sufficient children are rated hostile because they refuse to do what they see as silly things. How

do adults feel about him? What are the adults like if there is conflict with authority? Is he easy or hard to like and why? Specifically, what are the qualities which are evident in the dealings with authority?

The family matrix is a never ending source of diagnostic information. Here we are too prone to accept appearances for reality. There are family scapegoats (Bermann, 1974). There is super ego lacunae, where families actually encourage acting out while verbalizing the opposite, an increasing family pathology. There is both real and presumed brutality and neglect.

Here the possibilities for the diagnostic processes range from interviews to Draw-A-Family type projectives, social work family histories and "live in" situations when the professional observations are made in the home, even by TV tapes to record the interaction. Family diagnostic sessions provide a substitute for going into the home. Once we get over the concern about middle class norms or the family customs we can begin to look for the essential relationships embodied in the family. What has the family relationship provided the child in question? What resources can it provide?

It is important to appreciate whether or not the problem stems back to the family nurture as a primary group where basic socialization should take place. If there has been no adequate family socializing process, the school is faced with a most difficult situation. We see many children who are described as demanding inordinate attention when what they really need is basic primary relationship of caring and trust. If there has been no reasonable primary experience, the youngster will try to make the teacher into a parent surrogate, change the classroom to provide a peer group for depth relationship like a gang or somehow make an effort to establish his selfness through profound primary acceptance. His efforts may be disorganized and hectic but they stem from deep in the core of his being. Our diagnostic concern with the family as a primary group ranges not only to information about the absence or presence but the individual nuances of family impact. Again, with special children we want to know the impact of the family patterns on the child with the disability and the impact of the child on that family as well. There are overtly rejecting families, realistic and supporting families and overprotecting and restricting families. There may be deprivation of the normal experiences due either to their limitation or to the family policy.

Area D is the school, certainly one of the major sources of diagnostic information. The school is the largest generator of referrals of children with socio-emotional problems: in effect school is a gigantic life stress test with obvious evidence for understanding behavior. School experience crosses many domains. One can see social relationships in many contexts, work attitudes, learning processes and

relationship to authority. Emotional states can be observed. School is the only professionally staffed setting which sees all children, for an extensive time and over a long period of years. Schools also have a variety of resources and opportunities to explore the child's ability to cope. There are many contributions to the understanding of domains A B C in the school as well as an examination of conditions related to education itself. It is not just how well he does in school - academic and behavior wise - but what attitudes are revealed toward school, learning and achievement. Is knowledge held in high value? Is he overanxious about failure, and afraid to try new things? Some pass shop, some chorus, some football, some lunch and some a given subject only. The learning style the youngster uses may reflect the prototype of learning which was fostered in the home.

Moos' scale can tell us how reasonable the school is on a normative basis, and there are many scales of attitudes toward school, teachers, subjects and education in general in the prior references.

Adolescence in particular produces strong responses to school. Youth who are basically alienated are often expected to change in response to the application of superficial interventions. Of course, they do not change. Special education has overall been less responsive to the complicated problems of youth in contrast to the young children. In many school systems, the most significant deviance is found at the junior and senior high levels. Often these are called discipline problems when they should be seen as socio-emotional deviance conditions. Even the program in alternative schools falls short of reaching the interests of some youth. The efforts to "keep them in school at any cost" demonstrates how far we are from a synthesis of diagnosis and helping efforts. The drop out index is one important social diagnostic measure.

In the educational diagnosis we need to ascertain how free the child is to utilize his intellect and other abilities. What is his cognitive style? Does he have potential talent suffering from inhibition? Are his thought processes distorted? Is his memory storehouse adequate? Is achievement compensatory?

As we move across the grid in the four areas (A B C D), the etiology column functions to give depth and clarification to the present state column rather than the reverse where everything must come out of the history. We look for the life continuity or lack of it as we trace school adjustment and family constellation over the years. Often the diagnostic understanding comes from study of what else was happening when the symptom first appeared.

Interventions are evolved from the nature of the psychological problem as revealed: solutions are provided to meet problems. The vast array of available interventions has already been noted, and

Catterall (1970) has provided an interesting listing of possibilities. Actually, the difficulty we face in helping is usually less due to a lack of knowledge than to access or control of the necessary conditions. We have arrived at an understanding which predicates a certain style of intervention, but we do not have the resource needed to follow through. Families are resistant to change. There is little of the restorative treatment available in our society needed to help the psychopath. Even when a disturbed youngster just needs to have a different style teacher there may be no ready options. Schools are seldom as flexible as they might be. Thus, one is left with second best or third best and sometimes nothing at all which can be done. The remedial efforts undertaken must at least make psychological sense as indicated in the previous section on differential diagnosis. It is easier to know what to do than to be able to do.

Follow-up or evaluative studies are a quagmire, discussed rather fully in Conflict in the Classroom (op. cit.). There is no place for studies on which intervention works best except as we consider what works best for what problem.

The chart for open diagnosis also emphasizes the search for assets in the study process. What resources has the disturbed child? A desperate family may still be a family that can generate positive patches. We are not looking for perfect support systems, just many places where a little help could be provided. A warm and caring sibling, a teacher that is involved with the child, a mother who can try again if someone supports her - these are the places we look for help. Not perfection - but mitigation is the goal. Clubs, big brothers, case work treatment - all are in our ideas of help. (See Cherney & Morse, op. cit.)

Conclusion

When we deal with the diagnosis of socio-emotional impairment, we are dealing with an endless series of "N of 1." Each individual has a right to be seen as unique. The reason why stereotypes are not in order is really because they are not accurate. Names and categories lie as well as hurt. The internal state and situational surround for every single youngster is a one time happening. No two autistic children are identical, no two delinquents, no two beset with anxiety. N of 1 technology has been around for a long time but it lay dormant until the behaviorists made it respectable. The basic tenant is that we must stop assuming similarities in aggregates of children. One or two significant characteristics which appear the same or a test score identity does not make several children into a common image. The purpose of diagnosis is to search out uniqueness and not to categorize. The assumption is that each child is worth knowing in his uniqueness. When we have assembled enough significant valid diagnostic information

about a youngster and his situation we can make predictions and we can assume some wisdom about interventions. But it will not come easily. Whatever we understand about behavior as mental health professionals we must be able to share with colleagues for the child's welfare. The information must make sense to all who are involved. That is the nature and function of diagnosis.

The importance of the school in mental health comes from the fact that it is the only professionally staffed agency which sees all children, and thus can serve a screening function as well as provide more diagnostic and treatment services for those with serious problems. Schools have group life, a vast range of possible activities, many caring adults and a mandate to use these resources for the welfare of all children, even the deviate child. We have the growing resources of special education for the emotionally disturbed. And the problems of socio-emotional deviance cannot be ignored even if we tried to ignore them. In a fractured society as ours is, neglect cannot be tolerated. A major investment in the adjustment of our children and youth must be forthcoming. We cannot afford anything less than an intensive effort. The quality of this effort will be dependent upon a new style and higher level of diagnosis in the schools.

REFERENCES

- Ahlstrom, W. M., & Havighurst, R. J. 400 Losers: Delinquent boys in high school. San Francisco: Jossey-Bass, Inc., 1971.
- American Psychiatric Association Committee on Nomenclature and Statistics. Diagnostic and statistical manual of mental disorders. (DSMII) (2nd ed.) Washington, D. C.: American Psychological Association.
- Barker, R. G. Ecological psychology. Stanford, California: Stanford University Press, 1968.
- Beller, E. K. Clinical process: The assessment of data in childhood personality disorders. Glencoe: The Free Press of Glencoe, 1962.
- Bermann, E. The scapegoat. Ann Arbor, Michigan: The University of Michigan Press, 1973.
- Bersoff, D. N. Current functioning myth: An overlooked fallacy in psychological assessment. Journal of Consulting and Clinical Psychology, 1971, 41, 391-393.
- Carver, R. P. Two dimensions of tests. American Psychologist, July 1974, Vol. 29 (7), 512-518.
- Catterall, C. D. Taxonomy of prescriptive interventions. Journal of School Psychology, 1970, 8, 5-12.
- Cheney, C., & Morse, W. C. Psychodynamic interventions in emotional disturbance. In Rhodes, W. C.; & Tracy, M. D. (Eds.) A study of child variance Vol. II: Interventions. Ann Arbor, Mich.: University of Michigan, 1972, 253-397.
- Coelho, G. V., Hamberg, D. A., & Adams, J. E. (Eds.) Coping and adaptation. New York: Basic Books, 1974.
- Comrey, A. L., Bacher, T. E., & Glasser, E. A source book for mental health measures. Los Angeles: Human Interaction Research Institute, 1973.
- Cowan, E., & Lorion, R. P. Which kids are helped. Journal of Special Education, 1974, Vol. 8 (2), 137-192.
- Cromwell, R. L. Classification of emotionally disturbed children. Presented at the Southern Society for Multivariate Experimental Psychology, Atlanta, Georgia, April 1972.

- Cromwell, R. L., Strauss, J. S., & Blashfield, R. K. Theoretical position. (Draft)
- Cruickshank, W. M. Education of exceptional children and youth. (Rev. Ed.) New Jersey: Prentice-Hall, Inc. In press.
- Dewey, J., & Bentley, A. F. Knowing and the known. Boston: Beacon Press, 1949.
- Engel, M. Dilemmas of classification and diagnosis. Journal of Special Education, 1969, Vol. 3 (3), 231-239.
- Erickson, E. Childhood and society. New York: Norton & Co., 1963.
- Evans, I. M., & Nelson, R. O. A curriculum for the teaching of behavior assessment. American Psychologist, August 1974, Vol. 29 (8), 598-606.
- Eysenck, H. J., Easting, G., & Eysenck, S. B. G. Personality measurement in children: A dimensional approach. Journal of Special Education, Vol. 4 (3), 261-269.
- Fischer, C. T. Contextual approach to assessment. Community Mental Health Journal, 1973, 9, 38-45.
- Fromm, E. The anatomy of human destructiveness. New York: Holt, Rinehart, & Winston, 1973.
- Gardner, R. A. Therapeutic communication with children. New York: Science House, 1971.
- Goodman, J. D. The psychiatric interview. In Woolman, B. B. (Ed.) Manual of Child Psychopathology. New York: McGraw-Hill, 1972, 743-766.
- Gough, H. Some reflections on the meaning of psychodiagnosis. American Psychologist, Feb. 1971, Vol. 26 (2), 160-167.
- Group for the Advancement of Psychiatry. Psychopathological disorders in childhood: Theoretical considerations and a proposed classification. New York: American Psychiatric Association, 1967.
- Hersch, C. The discontent explosion in mental health. American Psychologist, 1968, 23, 497-507.
- Hobbs, N. (Ed.) Issues in the classification of children: A handbook on categories, labels and their consequences. Los Angeles: Jossey-Bass, expected 1974.

- Jahoda, M. Current concepts of positive mental health. New York: Basic Books, 1958.
- Johnson, O. G., & Bommarito, J. W. Tests and measurements in child development: A handbook. San Francisco: Jossey-Bass, 1971.
- Joint Commission on Mental Health of Children. Crisis in child mental health: Challenge for the 1970's. New York: Harper & Row, 1970.
- Kanner, L. Emotionally disturbed children: An historical review. Child Development, 1962, 33, 97-107.
- Kohlberg, L., LaCrosse, J., & Ricks, D. Predictability of adult mental health from childhood behavior. In Wolman, B. (Ed.) Manual of Child Psychopathology. New York: McGraw-Hill, 1972, 1217-1286.
- Kvaraceus, W. C. Behavior problems. (3rd ed.) In Harris, C. W. (Ed.) Encyclopedia of Educational Research. New York: Macmillan, 1960.
- Langer, T. S., & Michael, S. T. Life stress and mental health. Glencoe, Illinois: Free Press of Glencoe, 1963.
- Lewis, W. C. Continuity and intervention in emotional disturbance. Exceptional Children, May 1965, Vol. 31 (9), 445-465.
- Lion, J. R. Personality disorders: Diagnosis and management. Baltimore, Maryland: Williams & Wilkins, 1974.
- Long, N. J., Morse, W. C., & Newman, R. G. Conflict in the classroom. Belmont, California: Wadsworth Publishing Co., 1971.
- Mensh, I. Clinical psychology: Science and profession. New York: Macmillan, 1966.
- Mercer, J. R. (Principal Investigator) Pluralistic assessment project, Box -178, 3393 Un. Ave., Riverside, California.
- Moos, R. H. Consulting Psychology Press, Palo Alto, California.
- Morse, W. C. Learning disabilities child and considerations of life space. In Cruickshank, W. M., & Hallahan, D. (Eds.) Children with perceptual and learning disabilities. Syracuse University Press. In press.
- Morse, W. C. Classroom disturbance. The Council for Exceptional Children, Arlington, Virginia, 1971.

- Morse, W. C., Schwertfeger, J., & Goldin, D. An evaluative approach to the training of teachers of disturbed preschool children. (Grant T21 MH 10388) Ann Arbor, Michigan: University of Michigan, 1973
- Murstein, B. I. Handbook of projective techniques. New York: Basic Books, 1965.
- Piaget, J. The moral judgment of the child. New York: Macmillan Co., 1955.
- Prugh, D. G., Engel, M., & Morse, W. C. The Classification of emotional disturbance in children: Report of the task force. (Draft)
- Rabinovitch, R. D. Reading problems in children: Definitions and classifications. In Keeney & Keeney (Eds.) Dyslexia: Diagnosis and treatment of reading disorders. St. Louis, Mo.: C. V. Mosby Co., 1968.
- Redl, F. When we deal with children. New York: The Free Press, 1966.
- Rhodes, W. C., & Tracy, M. L. A study of child variance, 1972, Vol. I. Ann Arbor, Mich.: University of Michigan, Institute for the Study of Mental Retardation and Related Disabilities.
- Robins, L. N. Deviant children grown up: A sociological and psychiatric study of sociopathic personality. Baltimore, Maryland: Williams & Wilkins, 1966.
- Robinson, J. P., & Shaver, P. R. Measures of social psychological attitudes, 1969, Ann Arbor, Mich.: University of Michigan, Survey Research Center, Institute for Social Research.
- Rosenban, D. L. On being sane in insane places. Science, 1973, 179, 250-258.
- Ross, D. C. A classification in child psychiatry. Philadelphia, 1964, 39.
- Rutter, M., et al. A tri-axial classification of mental disorders in childhood. Journal of Child Psychology and Psychiatry, 1969, 10, 41-61.
- Stinchcombe, A. Rebellion in a high school. Chicago: Quadrangle Books, 1964.
- Stoecher, U. T. A treatment study of an autistic child. Council for Exceptional Children, Arlington, Va., 1972.

- Szurek, S. A. Psychotic episodes and psychic maldevelopment. American Journal of Orthopsychiatry, 19526, 26, 519-543.
- Thomas, A., Chess, S., & Birch, H. Temperament and the behavior disorders in children. New York: New York University Press, 1969.
- Walker, D. K. Socioemotional measures for preschool and kindergarten children. San Francisco: Jossey-Bass, 1973.
- Weaver, A. They steal for love. New York: International University Press, 1959.
- Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. Unobtrusive measures: Nonreactive research in the social sciences. Chicago: Rand McNally, & Co., 1966.
- Wing, L. Autistic children: A guide for parents and professionals. New York: Brunner-Mazel, 1972.
- Wolfensberger, W., & Kurtz, R. A. Use of retardation-related diagnostic and descriptive labels by parents of retarded children. Journal of Special Education, 1974, Vol. 8 (2), 131-142.
- Wolman, B. (Ed.) Handbook of clinical psychology. New York: McGraw-Hill, 1965.

MEETING THE NEEDS OF THE EMOTIONALLY DISTURBED

BY

James A. Tucker, Ph.D.

Texas Education Agency
Austin, Texas

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

163

BIOGRAPHICAL SKETCH

Dr. James A. Tucker is Director of the Texas Regional Resource Center, Texas Education Agency, Austin, Texas. Formerly he has served as Chief Consultant for Pupil Appraisal to the Texas Education Agency; Director of the Prescriptive Approaches to Remediation Project, Texas Department of Mental Health and Mental Retardation; Research Associate, Research and Development Center for Teacher Education, University of Texas at Austin.

Dr. Tucker spent seven years as a classroom teacher (three years on the elementary level and four years on the secondary level including one year as a principal). His graduate work was done in Educational Psychology at the University of Texas at Austin. His publications include co-authorship of "Research in Teacher Education" a chapter in the Second Handbook of Research on Teaching.

AUTHOR'S CONCERNS

1. Definition of Emotionally Disturbed and Levels of Severity:

There is wide variation across the country as to the meaning of "emotionally disturbed" and in the quality of educational programming for the different levels of severity. Is it possible that this contributes to a situation where children who need service less are served in preference to those whose complexities make it difficult if not impossible to serve under presently existing programs in public education.

2. Legal Implications:

State laws vary considerably with respect to educational programming for the emotionally disturbed; federal laws deal mainly with the availability and use of funds for that purpose; and where such services are available by law, the right to due process is an increasingly important legal consideration. These issues create problems in the delivery of services to the emotionally disturbed.

3. Social Pressures and Related Problems:

Increasing family mobility and decreasing family cohesion have their effects on programming attempts in some instances. Home and school emphasis on academic excellence when the majority of American public school students are not college-bound provides a built-in failure syndrome for many students that affects educational programming for the emotionally disturbed.

4. Basic Developmental Implications:

When educational programming is recommended for children in pre-school and the early elementary grades, there are basic developmental considerations that must be taken into account lest insult be added to injury by demanding the development of a set of skills before a child is ready physically, socially, emotionally and neurologically.

5. Self Esteem Needs:

Perhaps the most essential element in the programming for the emotionally disturbed is the necessity of establishing and maintaining a positive self concept. Success instead of failure must be the name of the game. It is often difficult to build in success-oriented programs when the philosophy of the system is based on the normal curve.

6. Therapeutic Techniques:

In searching for the best programming for the emotionally disturbed, we are often guilty of reactive rather than proactive programming. While crisis intervention is often necessary, programming based on a symptom may remove the symptom momentarily but what about the long range outlook. Perhaps there are rarely any quick answers. It may take as long to remediate a child's disorder (if we ever do) as it took to bring it into being. The typical behavioral management techniques such as chemotherapy and behavior modification have definite symptomatic advantages, but unless the underlying emotional structure is positively affected then the changes will be only momentary in consequence. Yet it is these symptom-affecting techniques that receive the most acclaim.

7. Mainstreaming vs. Alternatives:

The explosion of the concept of mainstreaming seems to have had some serious fallout in that there are children who can best be served in self-contained classrooms at times. And even though we often give lip service to this fact, we may not have a clear picture in our minds of when this is true for an individual child.

8. Local School and Community vs. Institutionalization:

There is a trend toward phasing out or at least scaling down institutional care for the emotionally disturbed. What is being done to establish and assist local centers and expertise; and how can we increase and encourage parent involvement? What about juvenile delinquency?

9. Vocational and Pre-vocational Emphasis:

There is a rising emphasis on the vocational and pre-vocational needs of emotionally disturbed children along with other handicapped

students. Have we considered the long-range implications of such a program? Do we have the expertise to operate such programs? Is our planning realistic?

10. The Limits of School Involvement--A question we must answer:

Since the public school systems of America constitute the only social network reaching into every community in America, what role should the school play in the integration of services available from various federal, local and state agencies for the emotionally disturbed? Just how broad is our definition of educational programming?

MEETING THE NEEDS OF THE EMOTIONALLY DISTURBED

There is No Right Way to do the Wrong Thing

It seems self evident that the severely emotionally disturbed child can benefit from a special program geared to his obvious needs. Emphasis on programming for the severely involved will be reserved for later discussion in this presentation.

The initial consideration, however, involves those children who are defined as emotionally disturbed by existing laws and policies but are so mildly involved that the question may be which of the many techniques are best; but rather, whether or not the child would benefit more from receiving no programming at all, in the traditional sense of the word.

For too long perhaps we have been looking at the child who fits our particular definition for emotionally disturbed as though he is sick or has a problem which we can remedy by applying the right treatment. When, in fact, applying a treatment based on such assumptions may not only be ineffective, but in some cases may actually contribute to the problem. Such a child could be coping quite effectively with an environment which for any number of reasons doesn't allow for his capabilities, peculiarities and individual needs. Traditionally, programming for such a child has consisted of a diagnosis and a placement in a special education class for the emotionally disturbed.

There are those who bravely suggest that establishing such a program to treat the emotionally disturbed can become a self-fulfilling prophecy so that we end up with a full blown emotional problem when in the beginning we had only a socially different child, or a cultural misunderstanding. If they are right, then no amount of improvements in the treatment will correct the situation when the treatment itself is wrong. Perhaps what is needed most of all is a definitive statement as to what constitutes an emotional disturbance.

If we define emotional stability as a condition which renders a person capable of functioning successfully in society, then an emotional disturbance is a condition which limits such a capability. The problem with such a definition is that it is subject to the whims of a changing society in its treatment of individuals. We seem to be moving toward a normal society where more and more the socially different child is stigmatized in favor of those children who, regardless of their difference in culture, fit

the mold of the masses. So while we give lip service to accounting for cultural differences, we are systematically eliminating social differences. Such a society finds it difficult to cope with an individual that doesn't prosper under the system which is molded around the norm: it is just too tempting to cover such injustice under the cloak of "service to the handicapped," i.e., emotionally disturbed.

There was a time when more deviant children could be absorbed by society at some level in the maintenance of the society. But as our culture has become more dependent on technical skills that required specialized training, there has emerged a new sense of values. In order to survive a century ago, one could opt for a profession or for a skill or to head for the frontier and carve out an identity by pitting his wits against the elements. Schooling was determined largely by the individual's own perception of his need. As compulsory education came into wide acceptance, pressures to conform to a rigid school format began to take their toll. At first those who became known as "school dropouts" still had slots to fill which were needed and appreciated by the social order. But as our culture increased in technical sophistication, many unskilled occupations were either phased out or upgraded leaving a marked stigma attached to a person who did not have at least a high school diploma. And with the passing of the frontier, the adventurous youth who just didn't quite fit in could no longer "go west" to escape the pressure.

By a series of historical events an educational system has evolved which is geared largely toward the academic needs of those whose futures require advanced schooling; and this further increases the frustration and dissatisfaction of the child who is not inclined in that direction. Since the majority of children do not go to college, it seems long past time for American educators to begin planning a curriculum that also speaks to the needs of the non-college bound. The present heavy emphasis on academic achievement not only fails to meet the educational needs of many of the children labeled emotionally disturbed, it also contributes to additional emotional problems.

Let me hasten to add that while we often state verbally that our programming is not centered around academics, we have little control over this when the entire system is geared in that direction. The covert implication in most school settings is that a child is expected to achieve academically and this is often evaluated by society in terms of the marks on a pupil's report card.

Since a strongly academic program speaks only to the needs of a small percentage of students, it is no wonder that many children and youth reject the academically oriented curriculum we love so dearly as academically oriented professionals.

Further, since society is undergoing so many structural changes, i.e., increased mobility, decreased family cohesion, loss of occupational

identity and general erosion of integrity in business and government, children are thrown into an environmental press which requires them to depend on their native survival skills. It is difficult to understand how a child who manages to survive all the present chaos and exhibit only a set of behaviors which irritate his teachers, could possibly be considered any more emotionally disturbed than those of us who are disturbed by his behaviors.

Yet there exist in a number of states today broad definitions of emotionally disturbed which allow for any child who exhibits undesirable behavior to be classified emotionally disturbed. On the other hand, I am happy to say, there are states whose policies state clearly that before a child can be so classified he must exhibit certain severe and chronic symptoms which make it impossible for him to be served without specialized intervention beyond the scope of the ongoing regular program of education in the state; and furthermore, in at least one state, the child's parents are given a hearing during which all phases of the case are explained in depth and recommendations are laid out clearly. The parents have veto power at any point before or after the placement has occurred. While there is some criticism that such a process excludes service to some children who need it, it must be recognized that it serves two very positive functions: 1) it forces high quality comprehensive appraisal and professional deliberation in every case, and 2) it forces the established programs of regular education to look more closely at what can be done for those children whose problems are not severe enough to make them eligible for such a severe classification.

It is time we recognize that the more problems that cannot be swept under the special education rug the greater will be the probability that educational programming for individual children will begin to surface in regular classrooms. Those of us in special education should not succumb to the guilt that allows special education to relieve the pressures of regular education thereby reducing the chances of its getting into a truly personalized approach to education for individuals. Perhaps it is time that we establish a few priorities in terms of level of severity. We will have to answer such questions as "Is the socially maladjusted child emotionally disturbed?" "What about the chronic classroom disruptors?" "Can a child be labeled emotionally disturbed because he is a 'bad' influence on his classmates?" "Is a bully emotionally disturbed?" "Is a boy who prefers the company of girls before it is 'normal' emotionally disturbed?" "What about the class clown? ...the over achiever? ...the girl who weeps every time she gets an 'F' on her report card? ...the kid who forgets his books every day? ...the student who continues to experiment with drugs? ...the homosexual? ...the stalker? ...the genius who doesn't know enough to come in out of the rain?" Believe it or not, I have had educators tell me at one time or another that every one of the above mentioned types were emotionally disturbed.

It seems that the social definition of emotional disturbance that we have had may have served the culture, but it has failed to take into account the very individual differences we have been so quick to espouse in recent years.

At this point I feel that it is necessary to establish my reasons for spending so much time on the problems of definition. It should be obvious that the way emotionally disturbed is defined is going to determine what kinds of children will be so classified and require subsequent programming. Thus, the ways that laws and policies define "emotionally disturbed" is going to critically effect what is done for the child so labeled. I wish to establish at this point that in many areas of the country due to the ambiguity of the definition, children are being served under the guise of being emotionally disturbed when, in fact, they are quite normal. This fact seems to be recognized only too well by those involved and efforts are being made to correct it, but since tradition is so strong and legal machinery is so slow to bring about change, it may be years before the condition is rectified. In the meantime, ongoing programs for the emotionally disturbed tend to fall into two broad categories: 1) those for the mildly involved which I will refer to henceforth as emotional problems and 2) those for the severely involved which I will refer to as the emotionally disturbed.

There is probably no definition which would not be fraught with ambiguity and subject to local interpretation, but for the sake of discussion let me impose the following definitive statement:

An emotionally stable child is one who functions effectively in his social setting and feels comfortable about himself.

Everyone has emotional problems and learns to cope with them in whatever way serves his needs best. On occasion, however, either through a multiplicity of complex problems or a trauma reducing the coping ability of the individual, a person becomes entangled in a web of circumstances, internal and/or external, which render him incapable of coping. His normally effective way of coping are either unavailable or ineffective; and the condition appears to be chronic. Such a person has an emotional disturbance.

Emotional problems are not in my opinion handicapping conditions. In fact, there may be some question as to just who has the problem, the child or the person coping with the child. A handicapped child can have emotional problems as can a non-handicapped child. Emotional problems are not the exclusive property of special education. Children learn from such problems as often as not, and regular ongoing programs of counseling, mental health consultation and crisis intervention through the regular school program should be sufficient to handle most of them. Techniques such as behavior modification have proved quite effective in extinguishing undesirable behaviors and increasing those behaviors judged to be more appropriate.

And now, finally, I come to the subject of programming for the emotionally disturbed--those children who are truly incapacitated or

unable to cope with the educational system due to some chronic and severe emotional involvement. It is not within the realm of this paper to deal with the means by which these children are diagnosed. It will suffice to say that they have been duly diagnosed by whatever competent authority is required to establish that the disturbance is of sufficient severity to warrant specialized programming above and beyond the capabilities of the regular school program.

To classify a child with emotional problems as emotionally disturbed under the assumption that it will in some way help the child is wrong and no amount of window dressing can make it right. It is an inefficient use of funds, manpower and resources and it is debilitating to the child.

There are Unlimited Ways of Doing the Right Thing

In an earlier presentation at this conference, Dr. Mary Meeker presented "A Paradigm for Special Education" (1974). In that paradigm she alluded to three areas of emphasis: Area I, Primarily intellectual and academic; Area II dealt with the emotional, social and motivational factors to be considered in planning for the education of children; and Area III centered around the physiological aspects of a child's growth and development. Within that paradigm, the topic of this paper would seem to fall in Area II, and this limitation is acceptable in light of Meeker's statement that "To ask which area is primary or most important is sort of like asking whether the seed, the roots, the stem or the foliage is most important to the plant." The interplay between affective and cognitive aspects of a person's life is well known.

It is also important to invoke a motivational conceptualization since one of the most difficult problems in dealing with the emotionally disturbed has been motivating them toward the goals of education. Maslow (1943, 1970) offers a useful base from which to examine the motivational aspects of programming for the emotionally disturbed. Though sometimes criticized for being too simplistic, Maslow's need hierarchy provides a flow which in many respects parallels that of Meeker's paradigm. The major difference is that while Meeker treats her three areas as operating simultaneously and constantly interacting, Maslow implies that there is an orderly ascendancy of needs from physiological through the emotional to the cognitive. Figure I taken from Coop and White (1974) illustrates how Maslow's theory arranges basic human needs in order of decreasing prepotency--the first one taking precedence until satisfied at which time the second takes precedence, etc.

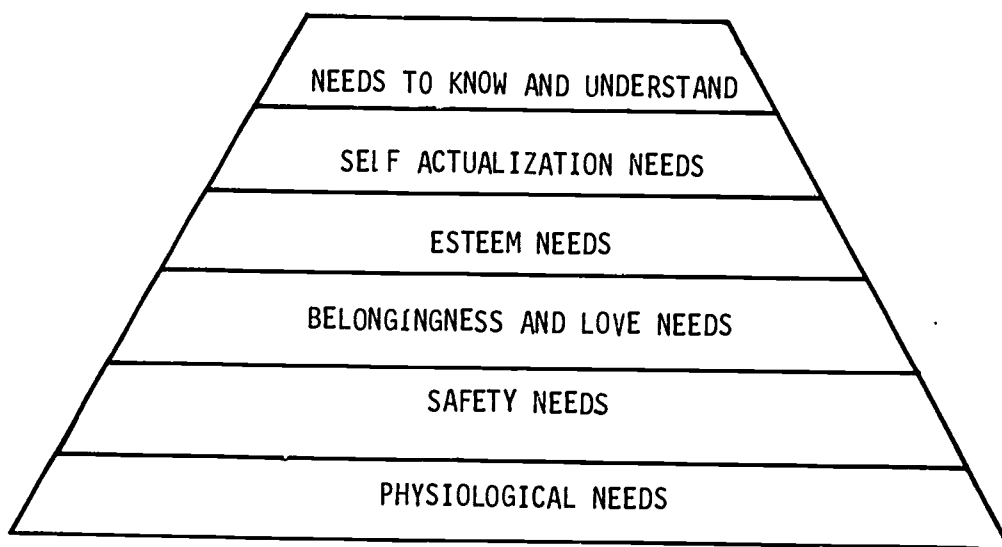


Figure I

Maslow's Hierarchy of Needs

Briefly the six basic needs are: 1) Physiological (hunger, thirst, sleep, elimination and shelter), 2) Safety Needs (security, protection, freedom from fear, order, and limits), 3) Belongingness and Love Needs (friendship, affection and a place in the social group), 4) Esteem Needs (self respect, a good reputation, attention, dignity and appreciation), 5) Self Actualization Needs (self-fulfillment, and achievement of potential), 6) Needs to Know and Understand (curiosity, classification, organization of knowledge, problem solving and logical reasoning).

Traditional education attempts to focus on the sixth need in the above list. And this is often done without being aware that if a child's more basic needs--one through five--are not first satisfied, very little success can be realized in academic pursuits. Instead, such a child is frustrated by continuous failure and lack of ability to concentrate on material presented and he generally becomes discouraged with the whole process called "school". Conversely, however, when the more basic needs are systematically satisfied, the child's inner drive leaves him no alternative but to want to know and understand because that is his most powerful need at the moment--the more basic ones having been satisfied. This is not to say that such a child will learn everything without guidance.

It is similar to the difference between leading a horse to water and getting him to drink. If the horse is thirsty all you need to do is present the water; if not, there will be no drinking, water or no water.

The question before us at this point becomes, "Where in the need hierarchy are the needs of the emotionally disturbed child not being met and can we within the framework of an educational system provide for those needs?" Traditionally it has been within the realm of Public Welfare and Health to provide assurance that an individual's physiological needs are being met, but education has even gotten into this area through school lunch programs, the school nurse, and immunization programs. It has been the public mental health agencies that have largely taken the leadership in assisting individuals in the meeting of needs two through five. The first question raised there is whether or not an effort to meet the more basic needs underlying the emergence of the need to know and understand would be appropriate for an "educational" program. Just where on the need hierarchy presented does education come in as an appropriate service to an individual. This question has been answered for decades in theory by Thomas Dewey's philosophy that the purpose of education is to meet the needs of the whole person. But in actuality, this theory has often been forgotten in favor of a major emphasis on the learning and remembering of facts, academic skills and the like.

A unique study supporting the adoption of such a theory in schools was reported by Meeker (1966) where three classes of tenth grade students suffering from emotional handicaps were given two hours a day of specialized programming in addition to their ongoing academics. All of the students were three or more years behind academically. During the two hours, they were engineered through intensely success oriented tasks related to their emotional needs and interests. At the end of the first year, no gains were shown in any area of academic achievement, but marked improvement was noted in areas of social and emotional growth. At the end of the second year, academic gains caught up with social improvement. Most students showed from three to eight years gain in reading and mathematics and all but five of the original 36 were returned to the regular classroom. Two had left the school and three were retained in a special class for the following year.

This study which needs replication under controlled conditions and with varying specified emotionally involved students, demonstrates that it is not necessary to totally abandon the academic curriculum in order to meet the needs of the emotionally disturbed. To the contrary, it is quite possible that cognitive subject matter can be used in the meeting of basic needs, thereby causing a positive generalization to other areas of cognitive endeavor, i.e., academic subject matter.

Basic Developmental Implications

It should also be noted that this study was done with high school students, of whom it is often said that they are too far along to undo what has already been done. It is quite possible that many of the more basic needs emerge again with renewed strength during the dramatic change period known as adolescence. The needs to belong to the group, self esteem needs, and even the need to realize one's own potential is rarely stronger than it is at this time. If the curriculum isn't sensitive to such needs in students who have weighed academics and found them wanting--wanting in interest, wanting in relevance--then there will be little gained by more of the same.

The developmental aspects of a child's growth play a dramatic part in what his attitudes and feelings will be toward education. It seems generally accepted that the earlier an emotional disturbance is identified, the better will be the chance of its remediation--providing the disturbance is severe enough to warrant such attention.

Raymond S. and Dennis R. Moore (1972) in their definitive work on early childhood education, concluded however that educational experience outside the home is of unquestioned benefit only for certain physically handicapped youngsters and those with severe mental retardation, neuroses, psychoses, and advanced emotional difficulties. They caution that many so called problems in early childhood are quite normal and only develop into problems when identified as such.

But when severe emotional problems are observed it is best to treat them as early as possible. Ashcraft (1971) studied emotionally handicapped children over a five year period and concluded that there seems to be a critical period in the early grades when emotional handicaps are more susceptible to treatment.

One of the most tantalizing findings, again reported by Meeker (pers. comm.), relates to the fact that for many acting out emotional disorders there is a related intellectual deficit in two of the Evaluation abilities in Guilford's Structure of Intellect model of intelligence. It remains to be shown whether or not such behavior can be improved by training such children in the performance of those abilities. It would indeed be interesting to learn that with some children, at least at an early age, what appears to be acting out behavior may simply be an inability to make correct evaluations in the processing of verbal information.

While the basic needs of the student are important, it is interesting to note that the same needs are operating the lives of the child's parents, and that the satisfaction or lack thereof on the part of the parents affects the functioning level of the child. Meyers (1974) reports a truly innovative study which found that child behavior in school improved

when the self esteem of the parents was improved. This study has real potential and should be replicated in a variety of settings other than the inner city setting where it was done.

As the parent of a severely handicapped child, I can attest to the desire for immediate answers--quick remedial techniques which do away with the never-ending symptoms of the problem. But perhaps there are no quick answers. It may take as much time to remediate a child's emotional disorder as it took to cause it, if, indeed it can be remediated. There may be no short cuts regardless of how promising some results look with certain types of children in certain controlled situations.

It is often tempting to wonder whether or not some projects and innovative programs are not more self-serving than they are effective; and that is in spite of statistically significant results. If this is not so then why do we continue to invent new programs while we rarely pick up on and/or replicate or put into operation those programs which have proven successful in the past. In our own defense, however, it can be said that funding agencies are often guilty of encouraging new and innovative projects rather than supporting the replication of or the putting into operation of an idea which proved successful elsewhere. Also, there may be very real colonial and regional attitudes which mitigate against the replication of something initiated by someone else. Are we mature enough to accept what has been established and begin to utilize what has already been learned?

When treating the more severe disorders, the remediation is often lengthy and expensive. The rewards are few and far between. Those in positions of civic influence tend to see programs in terms of dollars spent per child served and since short term remediations applied to normal children exhibiting abnormal behaviors provide a more obvious pay off, they often receive greater support.

Therapeutic Techniques

The question of which technique works best IF one is warranted depends entirely on the personalities involved. There are two general categories of programming techniques for the emotionally disturbed--those applied directly to the children themselves such as chemotherapy, behavior modification, special camp programs, counseling, etc., and those that work indirectly to effect a change in the children. Examples of the latter are mental health consultation and parent intervention such as in the Meyers study cited earlier.

If the desire is simply to reduce or eliminate a behavior that is undesirable, then the two most widely used techniques are, of course, chemotherapy to reduce hyperactivity and anxiety and behavior modification to retrain, extinguish or otherwise modify habit formations in

overt behavior. When these techniques are used, however, care should be taken to insure that while eliminating undesirable behaviors we treat the ongoing experience of the child in just as concentrated a manner. The elimination of such overt behavioral symptoms should probably be presented as interim or temporary techniques and not an end in itself. This point is in light of some very real reactions on the part of many educators to the more enthusiastic proponents of chemotherapy and behavior modification.

This writer has found a good deal of resistance to the concept that all behavior and educational output can be reduced to a set of observable behaviors which can be modified at the discretion of those in charge. Regardless of the arguments and the soundness of the philosophy behind such claims, it has proven wise to present such techniques in a more traditional framework and let the results speak for themselves.

Students most often receiving drugs to control behavior or anxiety are typically taken to a physician by their parents and the resultant chemotherapy is handled by the parents many times with little or no communication between the physician and the school. There is evidence now that it would be extremely advisable for the school and physician to work together and cooperate to provide the most advantageous program for the child's education and health.

A recent report by Dr. Mary Mira (1974) is based on research originating out of the University of Kansas Medical School. Mira asserts that a number of the most commonly used drugs such as Ritalin and the dextro amphetamines are often used with little regard for their side effects. She reports, for example, that these drugs have been found to retard physical growth from 18% to 40% during the time they are being administered. She recommends that when such drugs are used to control various symptoms, they should only be administered during the time when such symptoms are making it impossible for the child to learn. In otherwords, behavior controlling drugs should be avoided on weekends, during vacations and at other times when the stress producing factors are at a minimum. This, of course, does not apply to drugs which are administered for the control of seizures or other life threatening medical conditions.

A specialized treatment technique that has proved successful for many years but has only recently received wide attention is camping. One of the oldest such programs is the camp in east Texas sponsored by the Salesmanship Club of Dallas. It is operated as a residential camp for emotionally disturbed boys. The program consists of survival camping in which the boys are made responsible for their basic survival needs for periods of time ranging up to two years. One evaluation study reported in the book describing the program (Loughmiller, 1965) found that over 70% of the boys treated made successful re-entry into the regular school program. Follow-up evaluation continued to support these findings so as

to show that not only did they make a successful return, but they continued to improve and were, for the most part, successful in the academic setting as well.

Basically the program is built around basic group dynamics and basic human needs. It takes a longer term residential experience for the groups to become solidified and useful as a means of meeting desired personal objectives.

A unique feature of the programming at this camp is the low financial overhead. Forty severely emotionally disturbed boys are cared for by a maximum staff of twelve and the facilities are low-budget by design. High budget programs with costly equipment and extravagant experiences are declared to be the antitheses of the program's purpose.

The success of the residential program has spawned similar camps in other areas: three in Florida, one in Virginia and one in North Carolina--all organized and operated by former staff members of the Salesmanship Club Boys Camp in Texas.

More recently, on the theory that short-term placement would benefit the more mildly involved, the camp began experimenting with short range camping experiences and conversation with the leaders has indicated that the experience is still dramatic in that the campers exhibit significant gains in desired directions by the time they return home after the camping trip. But apparently the effects do not hold up as well and regression is noted.

This point raises the serious question of follow-up treatment to insure constancy of positive results. It also raises the question of whether or not it is always wise to return a child to a regular classroom without preparing the school and/or classroom for the experience as well as the person returning. In some instances, return to a regular classroom could be debilitating to the emotionally disturbed child. But how often do we take this into account?

One of the strategies reflecting an increase in the indirect approach to programming has been termed mental health consultation. It provides a vehicle for looking into questions such as the one just raised above. The historical roots of this technique go back many years, but the greatest impetus has probably developed as a result of Caplan's work out of the National Institute of Mental Health in the 1950's (Caplan, 1961; 1970). Practitioners working out of the University of Texas at Austin have taken a leadership role in developing the concepts of mental health consultation as they apply directly to working with teachers, school systems and educators involved in educational planning. Peck, Tucker and Haak (1973) briefly review the literature and present a model for personalized mental health consultation. Haak, Williams and Peck (1971) provide an extensive manual for practitioners.

Gallessich (1974) offers guidance in the training of school psychologists who wish to develop skill in mental health consultation.

A spin-off of the mental health consultation approach is a modernization of the case conference concept. It is more recently referred to as the "team approach", and it is based on the sage advice that more heads are better than one. In listening to the various practitioners extol the virtues of their favorite techniques, it becomes quite confusing when trying to determine which is the best technique. There is a simple answer, of course: There is no best technique! We must learn, if we haven't already, to adopt an eclectic attitude toward programming. It is to such an end that the team approach is geared.

Snapp, et al., (1973; 1974) have developed a model of intervention for the emotionally disturbed, among other handicaps, which builds on the consultation approach by providing a team of specialists as well as school administrators, teachers and other professional educators who by a unique cooperative arrangement between local mental health agencies and the school system, bring a corporate expertise to bear on each case or on the system as a whole depending on the need. One of the most innovative aspects of the program is that it seeks to intervene before students who are referred become crisis cases.

Mainstreaming vs. Alternatives

There have always been emerging trends and in special education the trends are apparent. The "mainstreaming" of handicapped children seems to have taken hold with great enthusiasm, but like so many other trends, the movement has been so rapid that there has been too little time for initial reflection as to whether or not it is always best to mainstream. Everyone will agree that there are children who can best be served in self-contained classrooms or in no classroom at all, but we are not always clear just when this is true for an individual child. The diagnostic intervention program referred to already as reported by Snapp et al., (1973; 1974) takes a more positive tack toward mainstreaming. The attempt to "keep" the referred child in the mainstream rather than providing a special program from which to bring about a re-entry into the mainstream. Sometimes to do this, changes have to be brought about in the system or on a school campus or in a particular classroom rather than in the child. Consequently such a program will only work well in a system that is responsive to change and self-evaluation.

The problems in conducting projects involving community agencies and school systems on any kind of cooperative basis are well known. But when any attempt is made to evaluate an on-going program using particular techniques, the problems are multiplied dramatically. A classic example of this is found in the following statement taken from the conclusion

of a report on the Hartwig project which served juvenile offenders in the Detroit area.

"It should be emphasized that this program was a demonstration project, in which the various treatment procedures were not fully developed. For example, data was not collected systematically in all cases, and adequate controls were not available for comparison. Serious problems related to this setting still remain, such as the difficulty in gaining access to the groups and institutions which exert a major influence on the clients and make it difficult to alter the systems of reward and punishment which govern the clients' behavior. Many parents were unable or unwilling to cooperate with the therapeutic programs for their children because of the overwhelming financial and emotional pressures in their lives which were prevalent in this deteriorating neighborhood. A large number of families contacted were struggling simultaneously with a lack of essential material resources, poor-quality housing, large numbers of children in the family, marital conflict, and one-parent family situations. Problems of controlling environmental conditions became even more complex in relation to the larger institutions involved in the lives of the clients. Many of the inner city schools, for example, were tied to strict regulations which were often incompatible with the individualized, step-by-step treatment required to modify clients' behaviors. It was often difficult for the worker to arrange a transfer for the client to another class or to change his class schedule to accommodate a job or special home problem. In addition, many ghetto schools offered few reward systems even for the motivated student because the school had to devote so much time and attention to handling numerous discipline problems. Some principals, counselors, and teachers did not make themselves accessible to the Hartwig staff, nor did they assist the worker in making the school experience more rewarding for the client." (Rose, et al., 1970, p. 230)

Local School and Community vs. Institutionalization

My conversation with special educators in a number of states lead me to conclude that for not only the reasons listed above but for many others as well, most of the severely emotionally disturbed children are being served in either private or public institutions other than the public schools.

111

A recent court decision in Texas has ordered that state to close down its homes for juvenile offenders. While the case has been appealed, the fact remains that another trend seems to be the phasing out of institutional care and the encouragement of local community centers to take over the responsibility for such care and service.

There has been a rather heated exchange in the literature recently between Zneimer (1973) and Guarino and Sage (1972; 1973) over advantages of the private residential program as an alternative to state institutionalization. The interchange was brought about as a result of New York legislation shifting public support from state to private sectors. Guarino and Sage argue that such a shift might invite the use of an extreme treatment alternative with large numbers of children whose mild to moderate handicaps would have been in some other states routinely accommodated within local public school programs. Zneimer argues that there are many poor special education programs who are not equipped to serve even the mild or moderately involved; and that the localized facilities would provide a better alternative for children who are rejected by regular education programs and not served adequately in special education. Guarino and Sage respond by stating that Zneimer missed their point, and that his pessimistic comments on the inevitable negative ostracism of the handicapped child in regular classrooms is either a question of opinion or "a most conservative position."

Regardless of which side of the argument we take, the fact remains that pressure is being exerted to move more and more of the responsibility for handicapped children into the local arena.

Sperling and Wolff (1974) report on a New York project called the Transitional Class Program which was designed for psychiatrically disturbed or educationally handicapped children who were not yet ready to enter regular or special education classrooms. Each child contracted daily with a teacher for the work he expected to accomplish, and each rated himself daily regarding his contract fulfillment in academic learning, effort, and attitude. There were five teachers and aids for the fifteen students involved. No child dropped out of the program and the authors claim that improvement in behavior and academic achievement was very satisfactory.

One of the most outstanding programs of all has been Project Re-Ed. As an alternative to institutional care, the Re-Ed School provides a short-term (usually three to six months) period of residential treatment for emotionally disturbed children. Gamboa and Garrett (1974) evaluated the continuing effects of the treatment on the child's self adjustment, school adjustment, and family adjustment. Each of 160 children was assessed at intake, at discharge and six months after discharge. Students showed significant improvement ($p < .001$) in all areas of adjustment from intake to six months follow-up. Another evaluation not yet published followed the 193 children enrolled between 1972 and 1974. Of

those all but 22 have returned to school and of those 171 returning to school, 73% have successfully returned to the regular classroom.

This project is being picked up by several other states either as a direct replication or in some modified form. It is indeed encouraging to see expansion and replication of successful programs. But are we getting anywhere near where we should be in reaching the total need? According to a spokesman for the National Institute of Mental Health quoted in a recent popular magazine (Ramsey, 1974), there are only about 150 day-care treatment centers in the U. S. where severely emotionally involved children can receive treatment on a local out-patient basis. These centers are presently serving only about 3,000 children according to the same source. It is further stated that of the 1,600 mental health clinics, only a minority are capable of treating children effectively, and even those who can, have such a long waiting list that it takes several months before treatment can begin. N.I.M.H. source is further quoted as stating that only 20% of the state mental hospitals provide services for children.

Vocational and Pre-vocational Emphasis

A single remaining area of concern is that of vocational training for the emotionally disturbed. Is it realistic to assume that vocational rehabilitation programs can effectively educate severely emotionally impaired youth even through a college degree program in many cases. The rationale is that it is cheaper than institutionalization, but what happens after the degree? Is there evidence that such a person contributes to the existing labor force better than they would have if they had been given a specific saleable skill?

In spite of searching, this writer has been able to locate very few ongoing exemplary programs of vocational training for the emotionally disturbed. Is it because such training is assumed in other related programs? Is such a concept needed? What is the state of the art in vocational training for the emotionally disturbed student? In order to meet the basic needs of such students, it will be necessary to furnish experiences, including that of contributing to the society in some positive way, which enhance the need to belong, the need for self esteem and the need to realize one's full potential. It has been adequately demonstrated that the production of license plates is not such an occupation.

Conclusions

1. Inasmuch as the definition of what is meant by "emotionally disturbed" in many respects determines what types of programming are

needed. it is important to understand thoroughly not only the local definition of the term, but also the levels of severity that may be so classified thereunder.

2. Inasmuch as an increasing number of decisions regarding the programming for emotionally disturbed children is decided by the courts, it is important to have a current awareness of the most important cases both decided as well as pending.

3. Inasmuch as the trend of education continues to be toward a college preparatory curriculum and inasmuch as this emphasis fails in many cases to meet the emotional needs of students, consideration should be given to ways of either changing emphasis or bypassing it on an individual basis.

4. Inasmuch as identification of emotional disturbance early in life offers a better chance for remediation and inasmuch as the more basic needs vary somewhat at different developmental levels, it is extremely important to remember the developmental changes, stages, stresses and incapacities when planning programs for a given age group. Further, more efficient screening methods are needed.

5. On the possibility that more basic needs must be met before those of cognitive import including academic achievement can become operative, education should consider including additional programming in the areas of emotional import which underlie academic achievement.

6. Since the emerging trend is toward the "team approach" in programming for individual children, it is recommended that wide replication be done of those projects and programs which have proven successful involving a multiplicity of expertise.

7. Inasmuch as mainstreaming is a group concept and subject to system-wide general acceptance as a desired objective, it is urged that careful study be given to each individual case so as to ascertain when it may not be to his best advantage to be in the mainstream; or if when the mainstreaming takes place, the system, school, classroom or the child himself is prepared for it in a manner that maximizes success.

8. Inasmuch as another emerging trend seems to be the reorientation of service from institutions to local community facilities, great care should be shown to the individuals who will be treated in such a manner. The moves in this direction should be slow enough to allow sufficient time for communities to gear up.

9. Since vocational and pre-vocational educational needs of the emotionally disturbed appear to have been neglected, it is recommended that study be given to the most efficient manner of offering these children a meaningful experience which will prepare them for actual employment as a contributing member of society.

10. Inasmuch as it falls more and more on the school system to be the coordinating influence in the services available to children which contribute to their maturation not only academically but emotionally and physically as well, perhaps there needs to be a definitive look at just how far the school's influence can be expected to penetrate in bringing about a better life for handicapped children, i.e., the emotionally disturbed.

REFERENCES

- Ashcraft, C. W. "The later school achievement of treated and untreated emotionally handicapped children." Journal of School Psychology (1971) 9, No. 3 pp. 338-342.
- Caplan, G. R. Prevention of mental disorders in children. New York: Basic Books, 1961.
- Caplan, G. R. Theory and practice of mental health consultation. New York: Basic Books, 1970.
- Coop, Richard H. and White, Kinnard. Psychological Concepts in the Classroom. New York: Harper & Row, Publishers, 1974.
- Gallessich, June. "Training the school psychologist for consultation." Journal of School Psychology (1974) 12, No. 2, pp. 138-149.
- Gamboa, A. M., Jr. and Garrett, J. E. "Re-education: A mental health service in an educational setting." American Journal of Orthopsychiatry (1974), 44, pp. 450-453.
- Guarino, R. and Sage, D. "Support in the private sector: the effects of one legislative provision." Exceptional Children, 1972, 38, pp. 745-749.
- Guarino, R. and Sage, D. "The private residential program: A response to L. Zneimer." Exceptional Children (1973) 39, pp. 567-568.
- Haak, R. A., Williams, D. L. and Peck, R. F. Consultation for personalization in the public schools: a manual for practitioners. The Research and Development Center for Teacher Education, The University of Texas at Austin, 1971, 258 pp.
- Loughmiller, Campbell. Wilderness Road. Austin, Texas: The Hogg Foundation, The University of Texas, 1965, 139 pp.
- Maslow, Abraham H. "A theory of human motivation." Psychological Review (1943) 50, pp. 370-396.
- Maslow, Abraham H. Motivation and Personality. 2nd ed. New York: Harper & Row (1970).
- Meeker, Mary. "An evaluation of the educationally handicapped program after one year: the measurables and the unmeasurables." A paper delivered to the annual meeting of the Western Psychological Association, April, 1966.

- Meeker, Mary. "A Paradigm for special education diagnostics: the cognitive area." A paper delivered to the National Regional Resource Center Conference in Reston, Virginia, September, 1974.
- Meyers, E. O. "Doing your own thing: transmission of cognitive skills to inner city children." American Journal of Orthopsychiatry (1974), 44, pp. 596-603.
- Mira, Mary. "Medical Management of the Hyperactive Child in School." A paper delivered to the annual meeting of the American Psychological Association in New Orleans, Louisiana, August-September, 1974.
- Moore, Raymond S. and Moore, Dennis R. "Early schooling for all?" Congressional Record (October 16, 1972) pp. E8726-E8741.
- Peck, Robert F., Tucker, James A. and Haak, Ruth A. "In-service consultation: a way of personalizing instruction to student needs." Research and Development Center for Teacher Education, the University of Texas at Austin, 1973, 20 pp.
- Rose, Sheldon D., Sundel, Martin, Delange, Janice, Corwin, Linda and Palumbo, Anthony. "The Hartwig project: a behavioral approach to the treatment of juvenile offenders." In Ulrich, Roger, Stachnik, Thomas and Mabry, John (Eds.) Control of Human Behavior. Vol. II. New York: Scott, Foresman and Co., 1970.
- Ramsey, Judith. "Guide to Recognizing and Handling Mental Illness." Family Circle, October, 1974, pp. 163-170.
- Snapp, M., McNeil, D. C. and Haug, D. "Development of in-school psycho-educational services for emotionally disturbed children." Psychology in the Schools (1973), 10, pp. 392-396.
- Snapp, M., Pells, B., Smith, J. and Gilmore, G. E. "A district-wide psychoeducational services delivery system." Journal of School Psychology (1974), 12, No. 1, pp. 60-69.
- Sperling, E. and Wolf, Edith. "Transitional classes: a new interagency program for disturbed children." American Journal of Orthopsychiatry (1974) 44, No. 2, pp. 248-249.
- Zneimer, L. "The private residential program as another alternative to state institutions." Exceptional Children (1973) 39, p. 329-333.

SENSORY-MOTOR DIAGNOSIS

BY

David A. Sabatino, Ph.D.

Northern Illinois University
DeKalb, Illinois

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

BIOGRAPHICAL SKETCH

David A. Sabatino is a native Ohioian, having received all three of his degrees from the Ohio State University. He began his professional career as a group worker at the Columbus Juvenile Detention Center, and later taught communication to impaired and autistic children at the Columbus State School. He was a school psychologist for four years, and a child-clinical psychologist at the Columbus Children's Hospital from 1965 to 1967. In 1967 he also held a clinical instructorship at the Ohio State University. The following two years he taught at Catholic University in Washington, D.C. He is now Professor and Chairman of the rapidly growing Department of Special Education at Northern Illinois University. Dr. Sabatino has worked as a consultant to, or as a staff member of a Regional Resource Center since their inception in 1967 and hopes to continue that relationship in Illinois.

AUTHOR'S CONCERNS

Sensory-Motor Diagnosis

1. The lack of trained professional manpower to knowledgeably ascertain sensory handicapped children and youth.
2. A concerted national effort to diagnostically describe, for program planning and instructional purposes, the severe and profoundly retarded, functioning developmentally 0-2.
3. A concerted national effort to diagnostically describe, for program planning and instructional purposes, children with multiple handicaps, but where at least one of the primary disabilities is a significant vision or hearing sensory deficit.
4. The need for a simplified classroom evaluation process.
5. A diagnostic focus on the preschool and career age years.
6. Construction of new tests for sensory-motor handicapped, and the standardization and re-standardization of old ones, on specific populations.
7. Are current diagnostic findings useful in planning curriculum?
8. Less dependence on formal assessment: greater dependence on informal assessment.
9. A Moratorium on psychological reports, utilization of profiles instead of written reports.
10. The necessity for a nationally adapted dynamic process to eliminate one shot diagnostic studies, requiring a baseline on all handicapped children of at least one year, with commonly agreed upon behavioral descriptors.

SENSORY-MOTOR DIAGNOSIS

Introduction

I come here with an acute problem that will be reflected in this paper. And, I would be less than honest if I didn't forewarn you. Essentially, I don't understand what diagnosis means because no one can describe the process to me. I respectfully submitted to the planners of this conference that to separate diagnosis from management is to roll the clock back one more time to 1875 - the place, Paris, the scene, the Parisian Council on Pedagogy and one Simon Binet. Habilitation and rehabilitation does not, in my opinion, require a diagnosis leading to classification. It requires a working description of the disability, and the environmental problems encountered by the person, in order that a management plan effectively adapt or adopt the environment to the handicapping condition, which lead to independent function.

I enjoy this quote from Wolfensberger (1965):

"Among some clinicians, particularly in the medical field, there exists what can almost be described as a diagnosis compulsion. Sometimes diagnosis seems to become more important than anything else, and once diagnosis has been achieved the clinician may behave as if the main task of case management were completed. Even among less diagnosis-oriented professionals, diagnosis is viewed as a sacred cow which has been enshrined in a mystique, and there are many superstitious beliefs associated with its worship. Let me enumerate only a few:

1. Diagnosis is better than no diagnosis.
2. Early diagnosis is better than late diagnosis.
3. Diagnosis is essential to successful treatment or case management.
4. Differential diagnosis is important for differential treatment.

5. Extensive evaluation is better than limited evaluation.
6. Team diagnosis is better than individual diagnosis."

The only way possible for me to deal with diagnosis, is to operationally define it as a description of the presenting problems - and the problem is not the child. It's the total environment in which the child finds himself - the attitudes, feelings, disabilities, buses, ramps, reading level, and expectations that surround him. I am enthralled with the child advocacy concept.

Mearig (1974) has it all. Let me review her review:

"The 1970 Joint Commission on Mental Health of Children formally recommended that a system of child advocacy from the national to the local level be organized. The following year the National Center on Child Advocacy was established in Washington, D.C. with eight projects of various kinds across the country being funded shortly thereafter. Numerous additional projects developed with funding from other sources, and some were organized on a voluntary basis. In May, 1973, the Center on Human Policy in Syracuse, one of the federally funded projects, sponsored a three-day conference, "How We Advocate," to which representatives of the various kinds of advocacy enterprises came from across the nation. One of the major realizations growing out of this conference was that there are a vast variety of activities encompassed under the rubric of advocacy. A primary question raised was how much national systematization is needed or desired for an advocacy movement to be effective.

A concept of child advocacy useful for this paper is provided in a monograph by Kahn, Kammerman, and McGowan (1972). These authors suggest that child advocacy as an entity be focused on certain kinds of activities, emphasizing rights and accountability, the self-dedication to persistence, and an activist commitment to children. They would define it as ... 'intervention on behalf of children in relation to those services and institutions that impinge upon their lives (p. 63).'

There are two major thrusts of the child advocacy movement, social advocacy and individual advocacy, although Knitzer (1971), in a penetrating analysis of the 1970 Joint Commission recommendations, raises the

question of whether individual change and social change can be served simultaneously. Can an advocacy system effect significant change in the care networks for a target population of children and for children in general?

This author believes that both goals can be congruent with the professional responsibility of a school psychologist."

Let's stop administering meaningless tests that provide too little or too much information, and start to describe the problem from the eye of the child. That reminds me of a story Nathaniel Benchley tells of his father, Robert Benchley:

"I still get a bang out of watching some of the old movie shorts that he made, which ought to be reshowed for this generation. He was a student at Harvard and in his senior year, he happened to enroll in a course in International Law. I think he wanted to become an attorney and he felt that this course might be helpful. He unfortunately, only attended two classes - the first and last. The last session, as some of you may have remembered from past experiences, is usually a final exam. As he walked in he was handed an examination paper. All the students looked at him. He probably made the greatest play of one-upmanship that has ever been made. He accepted the examination paper, looked at the questions with his all knowing eye and began to write. Some of the students fell out of their chairs and got up again. The first questions went something like this: Discuss the arbitration of the international fisheries problem in the North Atlantic Ocean with respect to trap fishing, purse seining, hatcheries protocol, dragnet and trolling procedures from (a) the point of view of the United States, (b) the point of view of Great Britain. That was the question and Benchley proceeded to answer it. His answer, so we understand, went something like this: I know nothing about the arbitration of the international fisheries problem in the North Atlantic Ocean with respect to trap fishing, purse seining, hatchery protocol, dragnet and trolling procedures from (a) the point of view of the United States, (b) the point of view of Great Britain. Therefore, I am going to discuss the question from the point of view of the fish." (Bower, 1965, p. 5)

If we lose sight of the child, we have lost everything that is meaningful in a diagnostic impression. Dr. Mac Norwood has said there

is no such thing as a deaf or blind child, but rather a child with hearing or visual difficulties. The point is to stop testing the test, or the handicap, or seeing the case, and to develop a description of the presenting problem and a plan for managing them.

I am to talk about the diagnosis of sensory-motor impairment. There are those among us who believe we don't really diagnose, and that all we can do is ascertain observable behaviors. They further feel that even the word "diagnosis" keeps us in a medical (pathogenic) model. It is not my intent to go into that set of arguments. You see, I really feel like a dog surrounded by four trees; I haven't got a leg to stand on. In fact, the real problem was limiting down the amount of material into a reasonable "state of the art" paper. And that reminds me - I intercepted a lovely coed on campus the other day. I said, "Pardon me, I ordinarily don't talk to strange women, but I'm on my way to confession and I'm short of material."

In a diagnostic arena as concrete as sensory-motor development and any concomitant disability, it should be easy to identify just ten major issues. Maybe that was the problem because I found it easier to identify one hundred rather than a mere ten. Speaking of ten, my sixteen-year-old son and I had a heart-to-heart talk bridging, I thought, the generation gap. He said, "I want you to free my mother from enslavement and liberate her from her bondage." I asked if that meant I was to fire her. As fast as I am losing my hair, I didn't want to do that - I'd never get another piece of homemade apple pie. Besides, I've been happily married for ten years, and I think ten years of bliss out of twenty years of marriage is pretty good. But my son made his point, and so to appease her (hire her back), I took her to a nice restaurant. Just the two of us. The maitre d', as they always do, looked us over and said, "How many?" "Well, there's two of us, but if you want to eat, that's three." I feel the same way about what I read in the 1974 literature in special education. It's disappointing to me that the major issues haven't changed much. In the field of deaf education, the 16th century controversy of manualism versus oralism continues. In the field of the visually impaired, it is still self contained versus mainstreaming. You know the blind were mainstreamed in the very early 1900s. Of course, educators of the visually impaired didn't hide behind the mainstreaming concept. They offered supportive programs to regular education, such as braille, travel training, A.D.L. skills using resource teachers, 'way back then. If it's true that between 2 and 20 percent of our school-age children have handicaps that interfere with their learning and behavioral adjustment, and that we are currently reaching less than 40 percent of the estimated more than 6 million population of handicapped children, then the reasonable thing is to mainstream those who can profit from it. That does not mean that regular education has done such a great job with those kids with handicaps (generally unsupported by special education) and that the best thing to do is let them continue. If we are to consider mainstreaming seriously,

all elementary and secondary teachers still in training must receive 15 to 18 hour blocks of special course exposure, and state CEC federations must require, as Georgia did, that all currently practicing regular teachers receive 6 hours or so of special education course work. Or, we could request legislative support to place a special education resource teacher in every building of 500 children (or parts of buildings thereof) and a special education strategist for every 3,000 children.

How does one plan for mainstreaming? Who should be mainstreamed? What is the role of particular special educators in that process? Educational Administrators say that a regularly trained administrator can do all that a special education administrator needs to do. I agree that they can use the rubber stamp just as well; I disagree that they can anticipate and plan, because you've got to know the territory. It's an interesting dilemma, to choose between a plan or procedure, an action or reaction; but too frequently we treat these horns of the dilemma alike. It has been said that a balanced organization provides for both - improvisers and organizers - because they are rarely one in the same.

When Emerson recited "Alas," (which is pre-Victorian for "Oh Hell,"), he said, "Alas for America. The air is loaded with poppy, with indecision, with dispersion, with slough, eager, solicitous busy-bodied, rabid American, catch thy breath and correct thyself." I also think of what Paul was quoted as having said to the Roman Council, in 128 BC, when he was about to take off on an expedition against the Macedonians:

In every circle, and at every table, there are people who lead armies into Macedonia. We know where the camp ought to be placed, what posts ought to be occupied by troops, when and through what paths that territory should be entered, where magazines should be formed, how provisions should be conveyed by land and sea, and when it is proper to engage the enemy, and when to lie quiet. If, therefore, anyone thinks himself qualified to give advice respecting the war which I am to conduct which will be advantageous to the public, let him not refuse his assistance to the state, but let him come with me into Macedonia.

Since almost all our research has failed to help us select the most appropriate teaching method, or even teacher, what does the working special education administrator do? To what is he committed?

We did a study recently at NIU, correlating the GRE scores administered to new students at the time of admission to the Master's program with supervisory ratings as to teaching effectiveness the year following

receipt of the degree. The correlation obtained was negative point eleven (-.11). Speaking of commitment, I remember the story of the Kamakazi pilot with fourteen missions who, when asked why, said, "I was involved, but I wasn't committed." It is so sad for me to hear my colleagues in elementary education predicting that special education will meet the same gloom and despair that they are now experiencing in institutions of higher education. This should not happen to a field as alive and well as special education.

If we are about to meet the quantity of special educators needed, how can we possibly begin to meet the quality needs if we are still training teachers to minimal entry level behaviors on a basic certificate? We have within special education such a cross section of disciplinary skills that it overwhelms me to think of the many ways in which the curricula used in aural habilitation and the education of visual impairment could contribute to the perceptual and language development of preschool and early school-age children classified as learning disabled, emotionally disturbed, and educable mentally retarded. Also that children with visual or hearing sensory impairment, with one major peripheral sensory channel impaired, could need great amounts of language and perceptual training which we have developed for high-incidence handicapped groups. The scope and mission of special education and the disciplines we work with make our lives the most exciting of any group in education or the rehabilitative sciences.

I apologize for my rambling introduction. My understanding is that this paper is to reflect the "state of the art" in sensory motor assessment. That task caused me some anxiety, simply because the term "sensory" can be applied to either sensory deficits (vision and hearing), motor problems of balance (ataxia) and dyskinesia (muscle joint disability commonly associated with cerebral palsy), or it can be applied to the development period referred to as the sensory-motor years, which are 0-2, but referenced as developmental fixation throughout the life span of the individual, as associated with conditions of severe and profoundly retardation.

With your permission, I would like to address this paper to four groups of handicapped citizens. These are four disability conditions which are as old as the recorded history of man and which still present major diagnostic difficulties. They are: (1) the visually handicapped, (2) the aurally handicapped, (3) the child fixated in the sensory-motor period of development, and (4) the child who has a sensory impairment of one or both senses and a concomitant handicapping condition such as mental retardation, emotional disturbance, a communication impairment, a motor (physical) impairment, or some other disability - the so-called multiple handicapped.

The rationale for selecting these groups in a discussion of the state of the diagnostic art is that you, this audience, comprise the

special education, habilitative leadership of the nation. If changes are to occur for handicapped children and adults, and for their families and communities, you are the ones who will make those changes happen.

More specifically, we speakers have been asked to identify and address ten issues that appear to be of critical importance. After a review of the literature and some soul-searching, the ten issues I should like to discuss with you are possibly a little dangerous, in that you may disagree, not with the importance of the issue, but with my view of the state of the art as it might be found for your state or region. I shall invite your disagreement by speaking to only what the literature contains, because in a political sense, you must remember that I am safely hidden in an ivory tower and am naive. Unfortunately, I don't feel the realistic pressures from legislatures, parents, superintendents, and special education directors that you do. Therefore, I beg your indulgence in what I hope is neither an ego trip for me nor a walk down the primrose path for you, but rather a clarification of where we stand on the issues of diagnosis (primarily psychoeducational) for the sensory and motorically handicapped.

ISSUE #1: THE LACK OF TRAINED PROFESSIONAL MANPOWER TO KNOWLEDGEABLY ASCERTAIN SENSORY HANDICAPPED CHILDREN AND YOUTH

According to the American Psychologist (1972) reports on school psychology training programs and the last issue of the Journal of School Psychology (1974) analysis of levels and patterns of training, the 57 school psychology doctoral degree-granting institutions do not offer sequenced preparation in the assessment of the sensory impaired or multiple handicapped. It is a safe bet that most school psychologists practicing in the United States have not had any specific training in assessing the sensory impaired. It has been difficult to obtain monies for student support from NIMH, as they do not want to train a psychologist interested in specializing with the handicapped. The Division of Professional Preparation in BEH has been slow to respond to training school psychologists.

I would like to see the Regional Resource Centers become practicum sites for school psychologists and other diagnostic specialists interested in achieving proficiency with the deaf and blind. I believe that since the legislative monies which support school psychologists are frequently special education dollars, all training programs should require a course and practicum in the assessment of the sensory impaired. It is not so much that every school psychologist will see a goodly number of seriously sensory impaired in his professional lifespan, but it will sharpen his skills in assessing all children, due to the added skill in assessing the sensory impaired. In addition, it gets the psychoeducational diagnostician in a position to initiate assessment of the multiple handicapped - a much overlooked and growing number of students.

Edna Levine (1974) has just completed a brilliant and much needed piece of work on psychological tests and practices with the deaf. She writes:

"Two situations make the condition particularly serious at this time. One is the substantial increase in the number of psychological workers with the deaf, most of whom have had no opportunity to 'prepare themselves thoroughly beforehand.' The other is the decision-making use to which are put the psychological findings and recommendations of unprepared workers in education and rehabilitation. A familiar example of the dangers of the practice is personified by deaf rehabilitation clients of average intelligence who have spent all their school years in classes for the retarded because they were mistakenly tested as such by an unprepared worker. Another is the diagnosis of psychological or learning disorders applied to deaf children who are simply reacting against one form or another of correctible mismanagement which an unprepared worker is not in a position to recognize. The situation is much the same as if an "unprepared" teacher of non-deaf children were to set up criteria for instruction in a school for the deaf.

From the psychologist's point of view, there are a number of factors that cause particular problems and frustrations. Foremost is the ironic fact that psychology's "chiefest tool" - the word - and principal instrument - the test - are also psychology's major weaknesses in evaluating the deaf. This should be handicap enough; but there are more. Second is the provoking lack of recognition that the competencies needed to overcome these difficulties are not being acquired in classic programs of psychological training. These competencies represent a highly specialized branch of practice, and, like all other specialties, require structured programs and provisions for preparation. The problem here is that there are no such programs specifically designed for psychologists for the deaf. Finally, and largely because of these factors, the role of psychologists in the field has been narrowed mainly to the tester-image; and this, to any self-respecting psychologist, is nothing short of a professional affront.

Levine (1974) surveyed 151 education facilities and 11 agencies to determine the utilization of psychological services for the deaf. The highest percentage of returns came from schools exclusively for the deaf - one-hundred and two (102) responded of the 134 listed in the 1971

American Annals Directory. Of the 102 who responded, 28 reported having no psychologist in their schools at the time of the survey.

Of the 154 psychologists who responded, 28% reported on psychological testing experience prior to testing the deaf. Sixty-five percent reported no experience with deafness prior to their work. Although 65 per cent of the institutions surveyed were using language of signs in combination with words, only 50% of the psychologists could use (or read back) sign language.

"For the 50% with sign language abilities, self-ratings were:

- a. Use: Excellent, 10%; good, 20%; fair, 30%;
poor, 40%.
- b. Read back: Excellent, 6%; good, 10%;
fair, 36%; poor, 48%.

The inference is that about 90% of the respondent group are unable to communicate effectively, if at all, in sign language with a manually oriented clientele.

Eighty-three percent of respondents report on-the-job learning as their only preparation for psychological work with the deaf. Ancillary help was obtained from readings, observations of teaching and testing the deaf, courses, and discussions with experienced workers.

The "preparation" reported by the remaining 17% was quite varied and included: multidisciplinary training programs for workers with the deaf; in-service training; supervised practicum; workshops on the deaf including a 6-hour workshop on counseling and testing; clinical internships; the opportunity to work as assistant to highly experienced psychologists for the deaf; "instruction from predecessor"; and deaf family background.

The following groupings summarize the communication approaches used in testing as reported by the indicated percentage of respondents:

- a. Speech and Speech Mainly (52%)
 - . Speech only
 - . Speech plus gesture and pantomime
 - . Speech plus writing and gesture
 - . Speech plus writing
 - . Speech plus writing and the use of an interpreter when necessary
- b. Signs and Signs Mainly (31%)
 - . Signs only

- . Signs mainly plus speech, gesture and pantomime, drawing, and fingerspelling, proportionately geared to needs of subject
 - c. Gesture and Pantomime (5%)
 - d. Interpreter (4%)
 - e. Writing and Gesture (3%)
 - f. Fingerspelling and Speech (3%)
 - g. Writing (2%)
5. Major Difficulties in Testing the Deaf (N-156)

Ninety-six percent of respondents reported major difficulty in testing the deaf, with 30% of the group specifying more than one difficulty. A remarkably low 4% claimed "no difficulty."

The 156 respondents gave 202 responses designating areas of difficulty. The following are the major areas mentioned by percentage frequency:

- a. Tests - 46% (lack of tests, absence of norms, problems of interpretation and assessment, problems of selection and administration)
- b. Communication - 37%
- c. Lack of Training - 7%
- d. Behavior of Deaf Subjects - 9% (problems of attention, motivation, rapport, hyperactivity)
- e. Other - 1% (inadequate testing facilities, inadequate amount of time allowed for testing, lack of history information, problems of testing the multihandicapped).

She summarizes:

However, there is little in the professional backgrounds of most respondents that would prepare them for psychological practice with the deaf. Sixty-five percent report no experience with deafness prior to their entry into the field, and 15% report relatively superficial contacts with deaf persons.

Further, 50% of the respondents report no ability whatsoever to communicate in the language of signs, while 40% of those who can use the language to some extent rate their ability as "poor." From these data alone, it is obvious that the workers involved should experience considerable difficulty in "getting to know" a manually oriented clientele (the majority of the deaf population related to this survey). In addition, 83% of all respondents reported that the only preparation they had for their work with the deaf was on-the-job learning.

However, not much time can be devoted to on-the-job learning when the job is a part-time occupation, as it is for almost 90% of the respondents. The startling fact is that only slightly more than 10% of respondents have the distinction of being full-time psychological workers with the deaf. A survey would be helpful to find out how many facilities serving the deaf have full-time job openings for psychologists to warrant the expenditure of time and effort involved in learning a new specialty.

Under these part-time conditions, the responsibilities of most respondents are heavily centered on testing - mainly of intelligence, achievement, and personality - plus staff reporting on the test findings. In several instances, audiometric testing was also reported as being thrown into the tester's hamper. It appears that most psychological workers with the deaf are conceived of primarily as testers rather than psychologists. Numbers of respondents take sharp issue with this tester image.

With the proposed expansion of the psychologist's function into counseling, the next major area of difficulty - communication - takes on menacing proportions. Although only 37% of respondents reported communication as a major difficulty in testing, this may be due to the fact that many evaluators use tests that require no language for administration or response and hence present no apparent problem in communication.

I am afraid that too much of the discussion under the first issue was directed at school psychologists; but I feel strongly that their alliance to special education needs to be clarified and strengthened if the source of their salaries is to continue to be special education monies. Maybe some school psychologists should be funded by regular revenue and work with regular kids, and others funded by special education to work 100% time with handicapped children. That latter group must have the specialized training with sensory impaired children. Audiologist, visual specialists, are much better prepared to work with particular groups of handicapped, but they possess the problem of not being able to communicate to other disciplines. Their problem, I believe, is that they are frequently not trained in multidisciplinary settings. Therefore, they do not know how to respond or what to expect from members of the other disciplines.

ISSUE #2: A CONCERTED NATIONAL EFFORT TO DIAGNOSTICALLY DESCRIBE, FOR PROGRAM PLANNING AND INSTRUCTIONAL PURPOSES, THE SEVERE AND PROFOUNDLY RETARDED, FUNCTIONING DEVELOPMENTALLY 0-2.

In the last ten years, we have witnessed a decided change in the emphasis and concern for the severe and profoundly mentally retarded. The right to education decision in 1971 in Pennsylvania has been followed by a number of such cases in many states. It is interesting to me because in 1965, as a school psychologist in Ohio, I can remember that any trainable child with a measured IQ below 50 was legally excluded from school (it was called an E-1 exclusion) and processed by the State Department of Welfare into one of their day programs, if the county had one, or into a State school and hospital. What a service I performed, a gatekeeper, as to whom should be permitted to stay in school or leave school, on the basis of a test score.

The expert witnesses presenting testimony at the Pennsylvania Association for Retarded Children (PARC), Commonwealth of Pennsylvania, stated:

1. The provision of systematic education programs to mentally retarded children will produce learning.
2. Education cannot be defined solely as the provision of academic experiences to children. Rather, education must be seen as a continuous process by which individuals learn to cope and function within their environment. Thus, for children to learn to clothe and feed themselves is a legitimate outcome achievable through an educational program.
3. The earlier these children are provided with educational experiences, the greater the amount of learning that can be predicted.

Due process rights were specified for children thought to be mentally retarded, specifying that no such child could be denied admission to a public school program or have his educational status changed without first being accorded notice and the opportunity of a due process hearing. "Change in educational status" has been defined as "assignment or re-assignment, based on the fact that the child is mentally retarded or thought to be mentally retarded, one of the following educational assignments: regular education, special education, or to no assignment, or from one type of special education to another." The full due process procedure from notifying parents that their child is being considered for a change in educational status to the completion of a formal hearing was detailed, going into effect on June 18, 1971.

In October of 1971, decrees provided that the state could not apply any law which would postpone, terminate, or deny mentally

retarded children access to a publicly-supported education, including a public school program. By 1972, all retarded children between the ages of six and twenty-one must be provided a publicly-supported education.

Local districts providing preschool education to any children are required to provide the same for mentally retarded children. The decree also stated that it was most desirable to educate these children in a program most like that provided to non-handicapped children. Further requirements include the assignment of supervision of educational programs in institutions to the State Department of Education, the automatic re-evaluation of all children placed on homebound instruction every three months, and a schedule the state must follow that will result in the placement of all retarded children in programs by September 1, 1972 (Abeson, 1973). The impact of such a programming change means that global test scores for severe and profoundly retarded children are not good enough. Specificity of function must be clearly delineated according to some format that can be used to make placement decisions and decide upon the instruction to be used.

It appears then, that what is needed are means of systematically looking at the learner. Iscoe (1962), in his dissent with the traditional classification systems, has developed a four-part system which encompasses how a child functions in:

1. visibility
2. locomotion
3. communication
4. psychological acceptance

He believes that this basic system of functional communication can assist interdisciplinary understanding. The exceptional child may or may not be disabled or handicapped in a specific function. To understand how he does function in the areas that are important to his adjustment to activities of daily living (ADL Skills), Iscoe proposed that the child be rated on a five-point scale. Iscoe explained the rationale for such a system as:

Simply put, exceptional children are so classified because they differ from normal children. They may differ in many ways, such as intelligence, physical capacity, speech clarity, and general adjustment to their worlds. If they differ only a little, the chances are they will not even be called exceptional. Beyond certain quantitative and qualitative differences they begin to stand out and take on the connotation of "exceptional." This is not the place to indulge in a discussion as to where the line is crossed and who stands as judge. Suffice it to say that in exceptionality, like in normality, a great deal of value judgment

is involved. Since it is possible to differ from normals in so many ways, it becomes necessary in the name of parsimony to select out certain aspects of behavior (domains) and attempt to order the exceptional child to these, comparing him with the normal child of the same chronological age and sex. What domains are to be chosen? Four are suggested for the present. Others might possibly be added later on. These are: visibility, locomotion, communication, and psychological acceptance. Each will be described and then a rating scale for each proposed (Iscoe, 1962, p. 13).

The proposed rating form is shown in Table 2. (See Table 2)

The Pennsylvania COMPLETE & COMPET documents are locked into an RPM form (Referral, Placement Master) which accompanies a profile of the student's behavioral characteristics, and together they serve as monitoring devices on program content for the 20 areas of behavioral development specified in the RPM Box Codes.

<u>RPM Box Codes</u>	<u>Program Content</u>
14	Gross Motor Development
16	Fine Motor Development
18	Visual Motor Training
20	Auditory
22	Tactile/Kinesthetic
24	Self-Concept
26	Communication
28	Conceptual
30	Math
32	Toileting
34	Feeding/Eating/Drinking
36	Grooming
38	Oral Hygiene
40	Nasal Hygiene
42	Clothing Care
44	Personal Safety
46	Self-Help and Independence
48	Social Interaction
50	Pre-Vocational
52	Vocational

For each program content area, further diagnostic specification has been completed by Sabatino & Salter (1974). In essence, for each Box Code, a criterion reference level of skill obtainment can be profiled and behavioral objectives and task analyzed sequenced steps of individual prescriptions can be prepared from the COMPET document. To further augment this system, it gives me great pleasure to inform you that the National Regional Resource Center for Pennsylvania (RRC for that state/region) has computerized the nearly 8,000 prescriptions under the

Table 2
PROPOSED RATING FORM

Name _____ Age _____ Sex _____ Date _____
 Problem _____
 Rater _____ Clinic, Agency,
 and Speciality _____ or School _____
 Supplemental Information _____

Circle the number most appropriate to the child. Ratings are always made comparative to normal children of same sex and age.

VISIBILITY

1. The physical appearance gives no indication of the condition. Note-- for gifted children, use this rating unless there is another condition along with being gifted.
2. There are some very slight indications of the condition, apparent to the trained specialist but not to the layman.
3. There are some fairly obvious signs of the disability or condition. It would be apparent to the layman.
4. There are moderately severe indications of the condition. The child stands out more than in 3 but less than in 5.
5. The condition is severe, it stands out clearly to all concerned.

LOCOMOTION

1. No apparent or reported difficulty in this area.
2. A little restriction but not enough to warrant special help.
3. Moderate restriction. Can keep up with his peers in some ways; in others, needs help or direction of others.
4. Moderately severe restriction. Needs help or direction most of the time; more than in 3, less than 5.
5. Severe restriction of locomotion. Needs constant help and direction.

COMMUNICATION

1. No difficulty at all, observed or reported.
2. Slight difficulty apparent to the trained worker, not to the layman.
3. Moderate difficulty, observable to the layman.
4. Moderately severe difficulty, easily noticeable to the layman. Not as severe as 5, but more severe than 3.
5. Severe difficulty manifested in this area.

Table 2

PSYCHOLOGICAL ACCEPTANCE

1. No problem exists in this area. Well accepted and sought after by peers. This is mutual.
2. Slight problem, possibly transient in nature. Not evident to any but experienced professionals. Accepted by great majority of peers.
3. Some evidence of difficulty. Noticeable to the layman after a while. Evident to the professional even though problem may be transient in nature. Still has some peer acceptance but general relationship to his group is brittle.
4. Moderately severe. Rejected by most of peers. Problem is not likely to be transient. Little effort to seek out friends. Social skills poorly developed.
5. Severe rejection by peers. Not accepted, little effort expended in making friends. Socialization at a minimum and the problem most likely one of long standing.

(Iscoe, 1962)

specific objective specified, and last year offered eight regional training workshops to acquaint the 570 teachers of trainable, severe and profoundly retarded on the use of this prescriptive system. As these teachers begin to use this system, it is constructed to provide evaluation on the merit of a specified objective and the prescription used for a given child.

The issue, I believe, is that education has not had to be concerned about the severe and profoundly mentally retarded. These youngsters have been, historically diapered or rocked at a state school or hospital. Until the advent of programs such as the Foster Grand Parent Program some ten years ago, their only stimulation was a white dress at necessary times of the day. On March 8, 1973, Dr. Ed Martin requested the RRCs to focus on the "more seriously handicapped;" that was a very large step for mankind. It brought the resources of BEH into the picture of educating a rather lost group of humanity who have had no champion. It is my opinion that the RRCs should create and agree upon a standard assessment procedure for the severe and profoundly mentally retarded and lock that into a materials descriptor system. That one aspect of the ALRCs is to have demonstration materials ready for training and use in state schools and hospitals, for special educators working in the homes, specialized programs for parents, and other alternatives that we have not begun to think of. I have had many serious disagreements over the training of the severely retarded. It is my opinion that any changes of behavior that lead to more independence in function and greater enjoyment of life are well worth while. My fear is that our attitude is still our one biggest drawback; we still judge performance too much from an academic achievement point of view. Mussen (1963) writes:

The growth and development of the individual's inherent potential may be actualized, facilitated, and enhanced--or thwarted, mutilated, and limited depending on the kind of physical, social, and psychological environment he encounters (p. 105).

Montagu (1950) adds:

The important point to understand ... is that the same genes may be influenced to express themselves differently and to have different end effects as a consequence of the different environments in which they function (p. 158).

ISSUE #3: A CONCERTED NATIONAL EFFORT TO DIAGNOSTICALLY DESCRIBE, FOR PROGRAM PLANNING AND INSTRUCTIONAL PURPOSES, CHILDREN WITH MULTIPLE HANDICAPS, BUT WHERE AT LEAST ONE OF THE PRIMARY DISABILITIES IS A SIGNIFICANT VISUAL OR HEARING SENSORY DEFICIT

The National Advisory Committee's 1973 Special Study Institute for Leadership Preparation for Educators of Crippled and Other Health Impaired-Multiply Handicapped Populations, Task Force VI, provides a working definition of multiple handicapped:

Crippled and other health impaired-multiply handicapped populations are composed of those individuals with physiological impairment and concomitant educationally related problems, requiring some modification of programs to meet their educational needs.

There are developmental tasks ordinarily and commonly mastered in infancy, early childhood, adolescence, early adulthood, middle age, and later maturity. When the normal learning of these tasks is affected by a physical or health impairment or related disability, the individual regardless of age becomes part of (a multiply handicapped) population ... Limitations of physical dexterity, locomotion, and vitality produce a multiplicity of secondary functional deficits. Taken together, they in turn affect psychological as well as intellectual growth and performance. Lack of early social and educational experience and exposure, often accompanied by recurrent periods of hospitalization, combine to form possible perceptual and conceptual deficits. Personal rejection by peers, owing to the inability of the handicapped person to keep physical pace in the activities of daily living and also because of certain "embarrassing" physical problems associated with their condition, such as drooling or disfigurement or the need for special prophylactic equipment, like catheters, affect social adjustment as well as self-acceptance (p. 6).

The Committee (Task Force II) felt that multiple handicapped and adults function at the full range of levels:

1. At a mainstream level, handicapped persons, with opportunity for support and monitoring by trained COHI-MH specialists, nurses, and other personnel, are capable of responding to either usual or modified methods and materials;

2. At a second level, the population can function in educational or vocationally oriented settings if provision is made for alternate strategies and periodic re-evaluation;
3. At a third level, it is necessary to vary not only the teaching strategies but also the content and focus of the educational program;
4. There is also a fourth level at which the population needs opportunities for the development of alternate strategies and a curriculum for the acquisition of knowledge and skills directed toward self-help, survival, and self-enhancement (p. 38).

It was somewhat shocking to me to find that most states' definition of handicapped includes multiply handicapped. The discrepancy in what a multiply handicapped child is and how to program for him begins there, with few states having well spelled out program guidelines.

Abeson's (1973) report on identification assessment and placement of handicapped children by states shows that not very many states have specific procedures for operationally defining a multiply handicapped child. Table 3 provides data on the multiply handicapped by state. (see Table 3.)

Rubella is an example of a disease that presents a multiple sequelae with the child. The frequent occurrence of deafness as a sequel of maternal rubella in pregnancy has been well documented (Sheridan, 1964). Following the 1963-64 rubella epidemic in the eastern section of the United States, Hardy, Monif, & Sever (1966) found indications of severe hearing loss in 10 of 17 infants whose mothers had contracted the disease during pregnancy. Interestingly, these investigators noted that although the auditory defects were most frequent among those children whose mothers had contracted rubella in the first trimester of pregnancy, they also occurred in infants whose mothers suffered rubella as late as the fourth month of pregnancy. Bordley et al. (1967), using Ewing test techniques and follow-up tests, found that 31 of 49 subjects from the 1963-64 epidemic failed a preliminary auditory screening test and 24 of these failed a hearing retest.

In addition to the hearing impairment, a general retardation in the physical development of rubella-affected children has been observed. Barr & Lundstrom (1961) reported that in comparing rubella children with other deaf children, the rubella groups showed arrested development which could not be attributed to their hearing losses. Lundstrom (1952) in a follow-up study of Swedish rubella children, showed that first-trimester rubella children were shorter and weighed less than did control group children and that this under-development continued to be more

Table 3
MULTIPLY HANDICAPPED
Assessment Personnel

State	Psychologist	Psychiatrist	Speech and Hearing Therapist	Physician	Educational	Other
Alabama	X			X		
Arizona	X				2 specialists in disability area	
Georgia	X		X			
Illinois	X	X		X	X	
Nevada				X		
New Jersey				X		
Oklahoma	X			X		
Oregon				X		
Texas	X			X	X	
Vermont	X		X	X	X	
Virginia				X		
Wisconsin					X	

Assessment Data

State	School History	Personal Family	Medical	Family Interviews	Group and Individual Testing	Parental Permission for Assessment
Alabama			X			
Arizona			X			
Georgia	X	X	X			
Illinois	X	X	X			
New Jersey			X			
Oklahoma			X			
Texas	X	X	X			
Wisconsin	X	X				

Placement Process

State	Placement Committee		Parental Consent for Placement	Appeal Process		* Review of Placement
	School Personnel	Non-School Personnel		Parental	School	
Illinois						*At least every 2 years ; case reviewed annually ; child every 3 years .
Nevada						

evident at three years of age. Desmond et al. (1967), in a study of the 1963-64 rubella babies, noted that 81% had a head circumference below the third percentile, and 66% had a length and body weight below the third percentile at 18 months of age.

In considering the intellectual capacities of rubella children, Vernon (1967) comments that a low intelligence quotient is characteristic of rubella children. Myklebust (1958), in a study of deaf children substantially reduced in performance on the Hiskey Test. Miller (1967) concludes that "there is little doubt that among rubella children of the 1963-64 epidemic an substantial portion may have severe brain damage and mental retardation." (p. 89).

Auxter (1971) reported significant differences between two groups of deaf children, both groups having similar IQs, but one achieving near to grade level, the other not, in muscular strength, motor speed, and motor planning. No significant differences were found between groups on tasks involving balance or sensory utilization.

Lawson & Myklebust (1970) found the incidents of eye defects was twice that for hearing impaired as normal hearing subjects. Studies (Furth & Mendez, 1963) have shown the deaf to have visual perceptual discrimination functions similar to hearing subjects. Hartung (1970) found that deaf children do not retain visual perceptual imagery nearly as well under short-term memory conditions.

It is obvious that the number of multiply handicapped children is raising in the general population. The reasons are many, but among them the major one is advanced medical practices that save lives, but at the expense of diffuse damage. One example is the prematurity factor. In the period from 1933 to 1955 alone, the mortality rate was reduced 55 percent (Hardy & Pauls, 1959). Although many infants now live through the catastrophic events of the perinatal stage, the prevalence of severe multiple handicaps among them has increased. The full significance of prematurity and its possible ramifications in the area of deafness are illustrated by the fact that the condition takes a higher toll of infant life than any other single factor. It also ranks as one of the leading causes of death among the general population, accounting for 10 percent of the total mortality (Knobloch, Rider, Harper, & Pasamanick, 1956). A condition of this type and of this pathological magnitude, often involving the central nervous system, could logically be expected to cause sensorineural hearing loss.

Vernon (1966) studied 1,468 deaf or profoundly hard-of-hearing children. He found the deaf and hard-of-hearing premature to have lower intelligence, obtain poorer school achievement and have a number of multiple handicapping conditions, many of them associated with central nervous system pathologies. The most striking finding here is that slightly over two-thirds of premature deaf children are multiply handicapped.

229

The disabilities other than deafness cover the full spectrum, including cerebral palsy, mental retardation, aphasia, visual pathology, and emotional disturbance. Thirty-three percent had one disability other than hearing loss, 27 percent had two additional handicaps, and 7.9 percent had three disabilities in addition to deafness. The syndromes most frequently found were aphasia with emotional disturbance and aphasia with cerebral palsy. In cases where four or more major handicaps were present (7.9 percent) cerebral palsy and/or mental retardation were almost always involved.

As the birth weight of the premature child decreases, the probability of multiple handicaps rises sharply. This is particularly true of the more disabling conditions--mental retardation, cerebral palsy, and emotional disturbance.

It is obvious from these data on multiple handicaps that premature deaf children are characterized by having one or more additional disabilities. Further more, these secondary involvements are critical conditions in the lives of these children, conditions which demand intensive psychological, educational, and medical attention if the children are to be adequately prepared to meet the demands of today's society (Vernon, 1966).

ISSUE #4: THE NEED FOR A SIMPLIFIED CLASSROOM EVALUATION PROCESS

In a recent report of the CEC Interagency Committee, the Executive Director of the Association for Education of the Visually Handicapped summarized this concern with accountability:

All of special education, and categorical programs such as those for the visually handicapped especially, must provide proof of their worth. The new people with responsibility for funds tend to ask why special children are "special" and, even more, whether special education is doing more for these children than the regular classroom could do. If we are to defend our programs we must have facts (Association for Education of the Visually Handicapped, 1973; p. 8).

Increasing pressure is being placed on special educators to provide evidence that efforts with exceptional children are beneficial (Lessenger, 1971). If charged to communicate the effectiveness of their programs, they must (1) state precisely what outcomes the program is designed to facilitate and (2) present evidence that the outcomes have, in fact, been produced. These demands on classroom teachers for accountability necessitate the use of an evaluation process; but the principles of evaluation may well be one area where preservice academic preparation was limited or non-existent for most teachers.

The special educator in the classroom or resource room, faced with the day-to-day reality of teaching children, does not need to learn another obtuse theoretical model or be overwhelmed by the academic prose in which most evaluation articles are written. Nor does he/she need what Ohrtman (1972) has aptly described as the "in and out researcher ... gets two sets of kids, do A to one group and B to another, compare them and one group does better at the .01 level--then off to the next project (P. 377)." Vergason (1973) and Jones (1973) have delineated many of the problems associated with the evaluation process. All too often there has been more effort required than value provided. Jones (1973) writes that before any school district should presume to devise a system of accountability for special education, the following questions should be answered:

1. What are the common and specific goals to which the teacher and school are striving?
2. What student, community, or societal need inventories are available, on paper, to indicate change strategies which should be undertaken?
3. What specific and measurable performance objectives have been written down that would enable parents, students and teachers to understand the minimum expectations of the unstructured programs?
4. What analysis of the existing delivery system is available to indicate that the current educational input approach is manageable as compared to the alternatives?

Vergason (1973) states that one area in which special educators can be more definitive about their programs is that of standardized terminology.

Evaluation Terminology Used in This Model

Goals refer to the major aims to be accomplished during a specified period. In order to achieve an overall goal, objectives are necessary.

Behavioral Objectives are measurable and generally contain three aspects: (1) what target behavior is to be modified; (2) to what degree; and (3) in what length of time. In all decision-making processes, a hierarchical structure of sequential objectives increases the probability of successfully achieving the goals. A clear distinction between goals and objectives must always be made. Goals are met by the achievement of appropriate objectives, which means that the process for determining goals and objectives might take several forms. The method used should be appropriate for the scope of the project and the facilities available. It is important to note that goals and objectives may

be appropriate for one situation and not another, and that they may have to be revised as the evaluation procedure continues through time.

Goals and objectives are always determined in the final analysis by teacher judgment. It is that judgment which distinguishes the teacher and a professional from a technician who merely works from a set of given rules. While the model presented here can provide information regarding the appropriateness of the objectives, often this is feasible only after the evaluation process has begun. The objectives are appropriate only if they enable the proposed goals to be achieved.

Instructional Strategies call for the specification of a teaching method or materials to achieve a desired goal or objective. Frequently the term "strategy" can be used interchangeably with "technique" or "task." In other words, a well-defined teaching approach will be used as an enabling step to achieve a desired objective. Generally speaking:

Instructional Strategies are a specified teaching procedure (method and material) developed to obtain a desired objective.

Criteria is the standard at which the objective is successfully satisfied. Objectives are usually written to include (1) level to achievement statement and (2) time to achievement statement for the (3) specified target behavior to be modified. Criterion referenced measurement specifies the absolute level or quality of performance of a student on some assessment task (Jones, 1973).

Feedback is the information obtained on daily performance or the child's learning efficiency and effectiveness at specified periods. It is judgmental to the instructional progress, providing a green light to continue the same objective, or a red light to stop and examine the objective and/or strategy being used.

Judgment is the professional opinion that is rendered that successful progress is being made or that changes in instructional objectives and/or strategies are warranted.

A Simplistic Evaluation Process

The evaluation process presented here can be viewed as a simplistic means of understanding what is happening. It contains three major stages: the pre-situational, the situational, and the post-situational. During the first stage (pre-situational) the goals and objectives of the program are defined. (See Figure 1.)

During the situational stage, data is collected which allows "valuations" to be made (for example, statements about particular behavioral objectives which demonstrate attainment of the desired goals). This step is essential if the evaluation is to provide any information

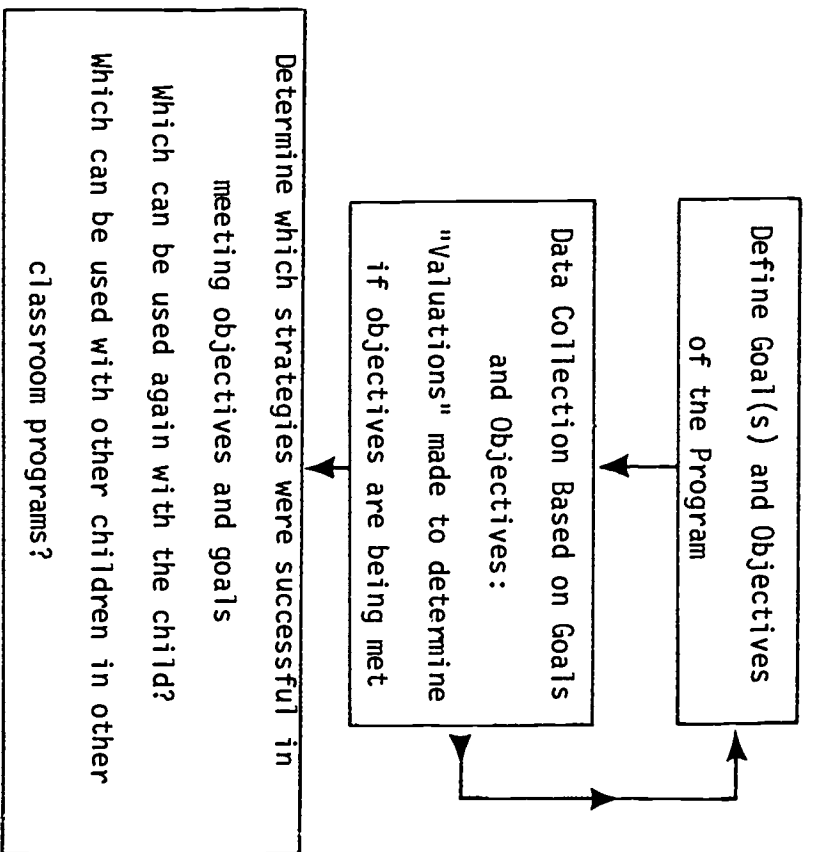


Figure 1

- F
E
E
D
B
A
C
K
- I. PRE-SITUATIONAL
Definition of Goals and Objectives
- II. SITUATIONAL
Data Collection and Description
- III. POST-SITUATIONAL
Generalizations

213

(Algozzine, Alper, & Sabatino)

regarding objectives, goals and their attainment. Such information may be collected by questionnaires, interviews, observations, etc. The information collected during this stage must be descriptively prepared so that its meaning and utility will be apparent. This involves representing graphically, or otherwise, the results of the "valuations" and defines the next step of the model. If the goals are not being met, the teacher can relate this information back to the first stage and either new objectives can be formulated or new goals can be agreed upon. If, however, the goals are being met, the teacher then proceeds to the post-situational stage.

The post-situational stage involves determining which parts of the program are effective for obtaining the objectives and goals. The major function of this stage is to establish the relationship between the program goals and the successful achievement of objectives which lead to these goals.

To summarize, the pre-situational stage involves defining the goals and objectives of the program to be evaluated. In the situational stage, information is collected, described, and related to the desired objectives and goals. In the post-situational stage, the obtained information is compared to that which is intended.

Stufflebeam (1972) has recently assumed a position similar to that of Scriven (1967) who ascribes that the fundamental goal of evaluation determines the value of a program or instructional activity. Originally, Stufflebeam (1968) saw evaluation as a systematic process of "delineating, obtaining, and providing useful information for judging decision alternatives (p. 129)." The CIPP (Context, Input, Process, and Product) Model he developed represents a frame of reference for presenting alternatives to decision makers and can provide a classroom teacher with information about her program; but this evaluation model is too complex for daily use in the classroom.

Other evaluators have discussed plans for curriculum and course evaluation (Conbach, 1963; Krathwohl, 1965; Lindwall et al., 1964; Michael & Metfessel, 1967; and Popham, 1969), while still others have presented theoretical evaluation models (Aikin, 1969; Hammond, 1969; and Provus, 1969). These plans generally represent similar processes for conducting educational evaluations, but they do not offer a simplified procedure for the already overburdened classroom teacher to use.

What the practicing special educator must have is a simple, manageable evaluation plan that will provide her with information and feedback for determining if her instructional strategies are working and, if not, why not? The model presented in this paper is an attempt to provide a practical approach to conducting an evaluation which follows a logical plan. A teacher should be able to apply it to everyday classroom situations which require evaluative decisions.

214/215

When the theoretical literature is reviewed concerning evaluation designs, it becomes evident that there are not as yet any models which provide practical evaluation devices for teachers.

The following two instructional data sheets are instruments which may be used by the teacher in order to evaluate her instructional objectives and maintain a record of the child's progress in accordance with the evaluation model presented. Figure 2 is used as an anecdotal record of the Instructional Strategies used with each instructional objective. They can either be those tried to determine the most appropriate or a sequentially arrayed set of teaching experiences. Note that time and number of sessions are important to record in evaluating the efficiency and effectiveness of a particular instructional strategy as it relates to a specific behavioral (instructional) objective. Figure 3 provides a two-week criterion referenced plot of teaching activities for a given instructional strategy in response to a stated behavioral (instructional) objective. For each instructional strategy used in Figure 1, a daily plot is shown graphically on Figure 2. These data record forms are used with success by the resource teachers working with Pennsylvania's Model Learning Disabilities Systems (Sabatino & Boeck, 1973).

Figure 2

MODEL LEARNING DISABILITIES SYSTEMS

PUPIL NAME _____ I.D. NUMBER _____

C.A. _____ PLACEMENT: IMC _____ RR _____ S _____

INSTRUCTIONAL OBJECTIVE: _____

_____Prescription I: _____

Number of Sessions: _____ Minutes/Session: _____

Prescription II: _____

Number of Sessions: _____ Minutes/Session _____

Prescription III: _____

Number of Sessions: _____ Minutes/Session _____

Prescription IV: _____

Number of Sessions: _____ Minutes/Session _____

(Sabatino & Boeck, 1973)

ISSUE #5: A DIAGNOSTIC FOCUS ON THE PRESCHOOL AND CAREER AGE YEARS

Deinstitutionalization, like mainstreaming, is a concept that cannot be easily fixed in time or space but requires continuum of professional resources. The historic focus on the school, and subsequently the school-age child, is to remove a chunk from a block that starts in the cradle and ends in the grave. Reynolds (1962) constructed a hierarchy of special education programs that is extremely current in perspective. The point is to create a continuum of programs and services that permits alternatives to placement in regular education over there on the far right, special education classes there in the middle, and residential programs, out there on the extreme left. What is needed to start a parallel flow in early childhood and that flows through career education?

Clark (1974) writes:

"There is no single definition of career education that has been universally accepted or endorsed."

Hoyt (Budke, Bettis & Beasley, 1972) has formulated one definition that appears to be receiving considerable attention:

"Career education represents the total effort of public education and the community to help all individuals become familiar with the values of a work oriented society, to integrate those values into their personal value structure, and to implement those values in their lives in ways that make work possible, meaningful, and satisfying to each individual." (p. 3)

In the area of career education there seems to be so little known that it is if, once a handicapped youth reaches a certain age, he is no longer of any significant concern to special education. About all that has been available are collections of job descriptions based on personal experiences of writers in the field (Kokaska, 1964; Kolstoë and Frey, 1965; Younie and Clark, 1969).

D'Alonzo (1974) summarizes the current stance of career education:

"The impact of career education upon the contemporary educational scene will generate a proliferation of new personnel, programs, and models to intervene and deliver services to handicapped children. Career education is a life long process. It must begin no later than the elementary levels within our formal education structure. The gradual introduction to career education programming in the elementary grades should develop into full time work placement by the student's senior year.

Career education has been in effect a number of years for handicapped students through the secondary level work study concept. A basic criticism of these secondary level programs in special education has been the continuance and promulgation of "watered down" curricula focusing on academic content rather than the relevant skill areas necessary for handicapped people to function vocationally and socially in their respective communities. Edwin Martin (1972), Associate Commissioner, Bureau of Education for the Handicapped, Office of Education stated that our educational system is just beginning to view employment as an important subgoal:

...From two-thirds to three-fourths of all special education programs are at the elementary school level, and in many, preparation for the world of work is only indirectly involved. Only 21 percent of handicapped children leaving school in the next 4 years will be fully employed or go on to college. Another 40 percent will be underemployed, and 26 percent will be unemployed. An additional 10 percent will require at least a partially "sheltered" setting and family, and 3 percent will probably be almost totally dependent. (p. 523-4)

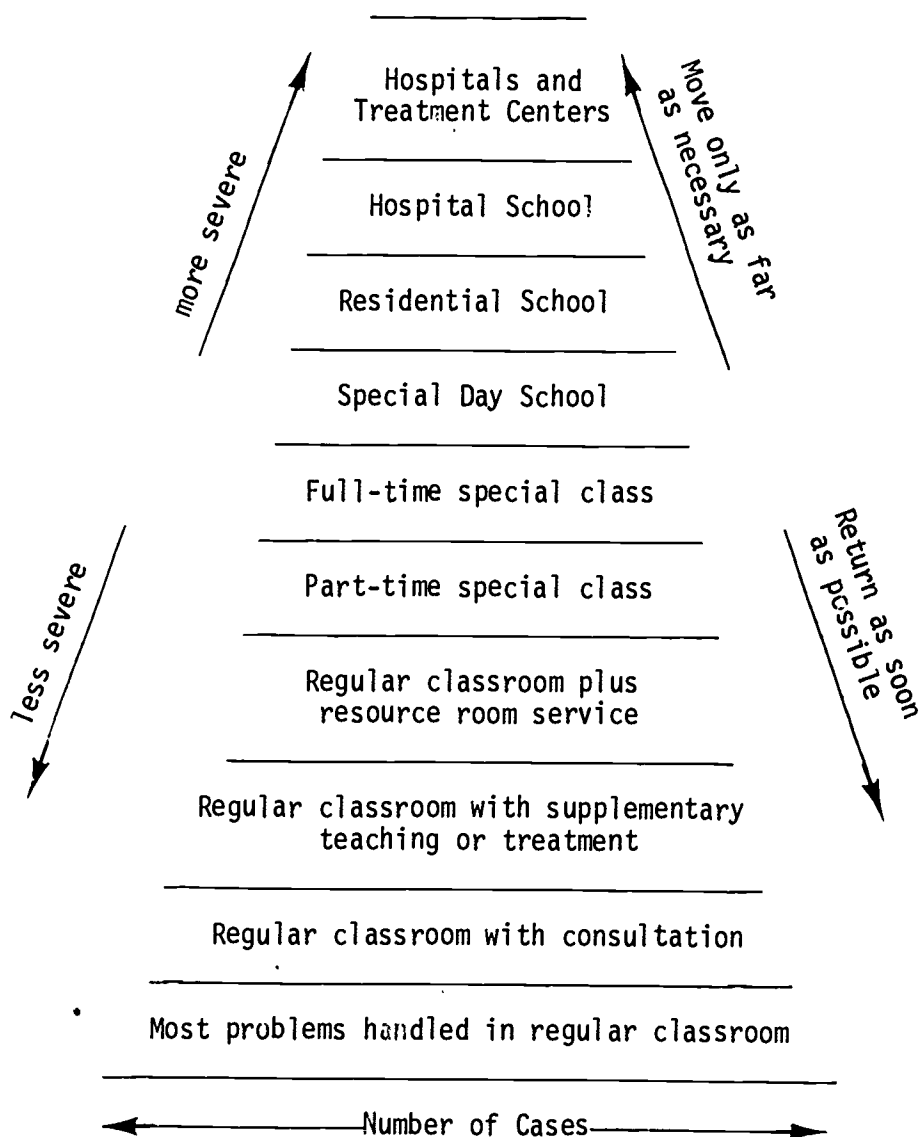
Based solely on this data the need to channel resources toward education concept for the handicapped is apparent.

The impetus to develop new innovative delivery systems designed to service handicapped students in regular and vocational programs is also supported by Marland (1971). In addition, Martin (1972) recommends:

...We need to redefine our basic instructional programs while developing more of these special vocational programs so that every child has the opportunity to partake in what is being called "career education," an education which provides him with exposure to a variety of work related experiences and which develops attitudes and skills relevant to future employment. (p. 524)

Clark (1974) has identified all of the possible career education models. While we will not take the time to go into them, the work diagnosis is not used once in any reference to the working models of career education. What is implied is that youth and young adults, can be moved through career education programs that are criterion referred to that vocational aspect being taught.

Reynold's Intervention Hierarchy



Special Education Programs (Reynolds, 1962)

221

The use of some part of a pre - or vocational task to reference the performance level to be achieved seems to carry with it far more reliability than the predictive search for an aptitude, which may be a real human trait, and how that trait relates alternately to vocational training performance. What is apparently necessary is to begin pre-school programs for sensory impaired early. Some states have dropped the ages down for sensory impaired to 2 years. It seems to me that it should be dropped to birth. Support services must begin early. The deaf child begins to babble in a normal fashion, but stops because he receives no aural stimulation. If a mirror is shining over his crib, he continues to babble. That type of intervention must be a reality.

Studies of institutionalization illuminate clearly the problem associated with human sensory deprivation. In 1915, Knox (1949) concluded from a study of a Baltimore Institution that despite adequate physical care, 90 percent of the children died within one year of admission. Spitz (1946) found that 15 percent of the children reared in institutions developed unusual behavior characterized by crying and indifference to adults: "The children would lie or sit with wide open, expressionless eyes, frozen, immobile face, and a far away expression as if in a daze, apparently not perceiving what went on in their environment" (p. 315). Spitz referred to this dependency related syndrome as "anaclitic depression". It appeared at the onset of mother/child or mother-substitute/child separation and would continue indefinitely if the deprivation lasted longer than five months.

In another study, Spitz (1946) observed children placed in an institution for the first two years of life. He found that the last four months of the first year were marked by a slow developmental rate if the situation was a deprived one. Two years following the initial observations of this study, he observed 21 of the children who had been in the original sample and found them to be noticeable retarded. There are several possible ways to explain the loss of intelligence in institutionalized children. Lack of sensory stimulation, dull peers, inadequate mothering, as well as inadequate social instruction are a few. The easy and readily available answer that the children lacked ability to begin with, is almost too simple an answer.

Kagen (1962) observed that five-year-old institutional children receive 85 orders in the same period of time during which the family child receives 21. The two-year-old family child asks 69 questions during one day, while the institution child asks 10 questions. The family child gains 28 explanations for his efforts; the institution child but 3.

Both Bowlby (1961) and Goldfarb (1945) in carefully controlled experiments found a 28 IQ point difference in three-year-old children placed in foster homes as compared to those placed in institutions.

Eleven years later there was still a statistically significant difference (23 points) between the two groups in favor of the children who had been placed in adequate homes before the age of three. Since the cultural variable of most intelligence tests are said to handicap some children, it may not be wise to utilize intelligence as a criterion in assessing the effects of maternal deprivation. For this reason, if we look at behavior generally, we can still see some interesting comparison.

Flint (1959) reports that in measuring the adjustment of institutionalized children in terms of their adaptive behavior that, "... security scores of the institutionalized infants are consistently lower than those of the well-adjusted babies. Thus, it seems that if the better adjusted children in an institution are compared to the better adjusted children in a home (foster home), the difference in terms of a sociability index is in favor of children who have the simlance of a constant mother/child relationship.

Provence & Upton (1912) studied institutionalization and its effect on children simply to quantify the "better" or "worse" comparison of institutionalized and family children. Seventy-five children were studied over a five-year period. The children ranged in age at the beginning of the study from four days to six years. This study concludes that the infants reared in the institutions were different in respect to autocratic activities such as the discovery of their own body and in the development of a concept of self. It is interesting to note that the IQs of the institutionalized children fell 24 points in four to five months' time on three different infant scales.

A better balance of community planned preschool programs are needed. Training mothers and other professionals to deliver community based service is needed on a regular, funded basis, especially in sparsely populated or rural areas. A review of what's needed for the adult or young adult in a career education sense is much more difficult to document. Once again, some type of community structure to protect, provide semi or fully independent living seems critical. If a diagnostic focus is placed on preschool and career youth for the handicapped, it will bring an end to the gatekeeping function of the so-called diagnosticians and force them into roles of planners.

"The Bureau of Education for the Handicapped has funded the Battelle Columbus Laboratories to conduct a major impact evaluation of the Handicapped Children's Early Education Program (HCEEP), now in its fifth year of operation throughout the country. The HCEEP Program funds preschool projects designed to meet the needs of young handicapped children, ages 0-8.

The child-based or 'Major Milestones' measure is intended to provide a common battery of test items which are applicable across projects and across categories of handicapping conditions. It will be anchored to the developmental stages of normal children and will ultimately not require a high degree of testing skill on the part of members of the HCEEP Project's staff. It is also intended that this measure should be useful as a pre- and post-measure for children and should be sufficiently fine grained to reflect change and growth during a single project year. Such a process will also provide a baseline against which to measure the child's actual progress vs. his expected progress.

The first step in developing the Battelle measure, therefore, was to select over 4,000 items from the literature and from approximately 23 existing tests and developmental scales. The majority of the items were anchored to the age at which the behavior measured by the item is attained by normally developing children.

The next step was to tentatively assign these clusters of behaviors into five major behavioral domains: motor, communication, cognitive, personal-social, and adaptive. A group of experts in Child Growth and Development who had specialized in each of the five domains were then asked to determine which of the clustered behaviors were critical, and to identify critical behaviors within that domain which had been missed. There were four major criteria used to determine the degree of criticality: (1) the behavior was judged to be critical to the child's development toward normal functioning in life (this was the most critical criterion); (2) there was an established body of professional knowledge about the behavior as it relates to the development of normal children; (3) the behavior was widely accepted by educational practitioners as critical for a child to possess; and (4) the behavior was generally amenable to educational intervention/instruction. After this, items were developed for the missing critical behaviors by going through the literature and by seeking items from additional tests. In these ways a total pool of critical behaviors within the five domains were established.

The next step was to classify each critical behavior into sub-domains within the five major domains. This was done: (1) as another way of insuring that the critical behaviors covered the full range of possible behaviors, (2) to make certain that each critical behavior was placed in a domain and subdomain where it would have the greatest

content validity for those people who would be using the instrument, and (3) to avoid duplication of similar items in different domains and subdomains." (Catterall, undated report)

ISSUE #6: CONSTRUCTION OF NEW TESTS FOR SENSORY-MOTOR HANDICAPPED, AND THE STANDARDIZATION AND RE-STANDARDIZATION OF OLD ONES, ON SPECIFIC POPULATIONS

The view currently held about most tests is that they are a necessary evil. That view is more of a reaction to the degree that we have been overly dependent upon test scores. While we are currently disenchanted with tests, we are asking for greater specificity in the observation of behavior as we attempt to determine target behaviors to provide instructional management. Cronbach (1960) discusses the purposes and types of tests by noting that "...all decisions involve predictions. Any test tells about some difference among people's performance (p. 17) ...a test is a systematic procedure for comparing the behavior of two or more persons" (p. 21). He concludes that not all tests really measure; some only act as observers of behavior. He feels that tests should not be restricted in their use to measuring instruments.

Specialized tests for children handicapped in specific areas of human function dates back to the 1850s when Sequin developed the form board (which bears his name) to be used with the retarded in connection with his program of sensory and motor training. Little is known about test development, except that it was a concern for children until 1905. The early Binet scale was essentially a test to be used in categorizing children of school age who were already articulate enough to be in school, although failing.

It was only too obvious that this test had many serious deficiencies if it were to be employed with handicapped children. Work with performance tests was an effort to overcome the administration and scoring problems associated with assessing children having very limited language, motor speech, or sensory problems. In the early 1900's Healy had developed a sequence of Picture Competition Tests to be used as a supplement for the more verbal Binet Test. In 1911, the Healy-Fernald Test series resulted. This was series of 23 academic and non-language performance type tests. These tests were not comprised to yield a single score, as did Binet, but were utilized to attain a descriptive picture of the child's strengths and weaknesses. Many of the early Healy test items have since found their way into other performance tests such as the Grace Arthur.

The theme over the next few years was the same. Test authors, working with specific populations of children, were attempting to build

singularly, or in combination, performance (non-language) test to assess that population handicapped by a lack of communication skills.

Knox (1914) developed a number of performance tests while working on Ellis Island, which was the arrival point for newly arriving immigrants. The Knox cubes are probably the most familiar to most of us. As a "valuable supplement" to the Binet, Porteus (1939) published a graded series of mazes.

The first attempt to pull several purely performance tests together was undertaken by Pintner and Patterson (1917). This scale consisted of fifteen such tests. Norms for a single score were established through standardization and an early effort to use this test with deaf children followed. As is generally the case, the reliability for this test was considerably lower than for that of a Binet type language instrument. This in itself may have been part of some of the ensuing arguments that ranged over the function of deaf children not being as bright as normal children.

The famous Kohs Blocks were developed in 1923 and almost immediately research on cerebral pathology began. Form I of the Arthur Performance Scale was developed as an aid to foreign speaking children in the New York public schools in 1930. This test used pantomime instructions and, therefore, was useful with the deaf. In 1934, the Cornell-Coxe Performance Ability scale, using many army performance scale items, was introduced.

Edgar Doll distributed the first revision of his Vineland Social Maturity Scale in 1935. Of course, since 1924 the Rorschach had been imported to the United States from Austria and an early motor test, the Oseretsky Tests of Motor Proficiency was translated from Russian.

The early 1930's saw the Merrill-Palmer Test of Pre-school Abilities developed and witnessed the beginning of longitudinal and infant prediction studies.

By the 1940's the Leiter International Performance Scale and the R. B. Cattell's Culture-Free Test of Intelligence had all received some use with different populations of handicapped children.

We talked earlier about the development of the Hayes-Binet Test for the Blind. In 1941, Hiskey standardized for the first time a performance test of the deaf. This test was standardized on deaf children four to ten years old. It had good validity and excellent reliability.

Children with speech and orthopedic problems were focused on with such tests as the picture Vocabulary Tests, which received such wide usage that it was followed by the Van Alstyne and more recently by the

Peabody Picture Vocabulary Test and the Pictorial Test of Intelligence. The picture pointing response theme to verbal stimuli became so successful that the Raven Progressive Markes and Columbia Mental Maturity Tests were developed or brought to this country for use. Both of these tests capitalize on matching like and different items using color, form, number, spatial, and non-language comprehension items.

This is not to be an exhaustive account of instruments for assessing handicapped children. The Stanford-Binet and various Wechsler scales, sub-tests, and test forms have filled the literature as basic measures of verbal and performance ability. The difficulty is that these tests offer a global score. This score, even in a normative sense, does not appraise the handicap or its effects on human function. Indeed, this score may penalize the handicapped child, causing him to appear to be something he is not. Ginzburg says it this way when asked about the clinical investigation of the handicapped person:

"The investigation serves not only diagnostic purposes but has a direct bearing on the problem of rehabilitation (habilitation with children), on the need for and the accessibility to psychotherapy, on vocational guidance, and educational assistance to provide answers to certain practical questions

(a) indicate the most practicable way of utilizing the more positive aspects of a given personality to overcome his deficiencies?

(b) predict how a particular patient will react to strains of a life situation?

(c) predict and measure the relative success and failure of various treatment methods in an individual case?"

Somehow our knowledge must go beyond the point that the verbal scale of the Wechsler instrument can be used with blind children and the performance scale used with deaf children. We fail to realize that neither the construction of these tests nor their standardization included sensory handicapped populations and that we really don't know how sensory impaired children differ from those non-impaired in cognitive development (Tillman, 1973). The commonly used Leiter Scales show sharp discrepancies in scores with Wechsler or Binet instruments with hearing subjects; and yet, many a deaf child has been denied admission to a state school for the deaf on the basis of his score on that test. Similarly, pasting together a so-called Hayes-Binet test for the blind has not been the answer to that group. Marshal Hishey's Nebraska Test for Young Deaf Children and T. Earnest Newland's Blind Learning Aptitude

Test (BLAT) have great promise and do include standardization for sensory impaired groups. However, very few psychologists have been interested in making studies of the sensory impaired.

Levine (1974) found in her study of psychologists working with the deaf that:

Of test categories, intelligence testing is routinely conducted by over 99% of respondents; achievement testing by 64% of respondents; and personality testing by 40%

The armamentarium of psychological tests used by the respondents in the examination of their deaf clientele is of impressive dimensions. Included are some 91 tests.

Tillman (1974) writes:

Individual intelligence tests for the blind are usually adapted from individual intelligence tests used with the sighted; if not adapted directly, they rely strongly on the design or rationale used in constructing the parent scale. The Binet and Wechsler tests dominate the adaptation efforts, e.g., the Irwin-Binet, 1911; the Haines-Binet Point Scale, 1916; the "Scissors & Paste Guide," 1923; the Hayes-Binet, 1930; the Interim Hayes-Binet, 1942. Davis (personal communication) is currently revising the 1960 Binet for use with the blind. The verbal sections of the Wechsler scales have been used generally with little or no modification, beginning with the Wechsler-Bellevue, Form I, 1939; the Wechsler-Bellevue, Form II, 1946; the Wechsler Intelligence Scale for Children, 1949; and the Wechsler Adult Intelligence Scale, 1955. The Haptic Intelligence Scale for the Adult Blind published in 1964, is based on a Wechsler type performance scale rationale.

Somewhat less in line with the historical trend of Binet and Wechsler adaptations are the following tests: The Vocational Intelligence Scale for the Adult Blind (VISAB Series), 1959; the Blind Learning Aptitude Test (BLAT), 1965; the Tactual Progressive Matrices (TPM), 1964; the Stanford-Kohs Block Design Test for the Blind, 1964; the Tactile Reproduction Pegboard (TRP), 1965; and the Stanford Ohwake-Kohs Tactile Block Design Intelligence Test for the Blind, 1966 (p. 80).

Table 1. Tests in Rank Order

RANK ORDER OF ALL TESTS REPORTED BY RESPONDENTS (N=166)	SPECIAL SCHOOL			REGULAR SCHOOL				OTHER AGENCY				TOTAL ALL
	RESIDENTIAL	DAY	TOTAL	SPECIAL CLASS	PARTIALLY INTEGRATED	TOTALLY INTEGRATED	TOTAL	DIAGNOSTIC UNIT	SPEECH & HEAR- ING CENTER	REHABILITATION SETTING	TOTAL	
NAME OF TEST												
Wechsler Intelligence Scale for Children (WISC) Performance	32	25	57	47	9	6	62	6	3	1	10	129
Leiter Intelligence Tests	21	19	40	34	5	3	42	7	3	2	12	94
Bender-Gestalt	24	19	43	29	6	2	37	1	3	3	7	87
Wechsler Adult Intelligence Scale (WAIS) Performance	31	10	41	18	6	3	27	6	3	2	11	79
Wide Range Achievement Test	3	16	19	30	3	2	35	5	2	1	8	62
Hiskey-Nebraska Learning Aptitude Test	15	10	25	14	7	3	24	1	2	1	4	53
Stanford Achievement	27	10	37	8	3	0	11	0	0	2	2	50
Draw a Person (Machover)	10	16	26	16	3	2	22	0	1	1	2	50
House-Tree-Person	8	5	13	12	3	2	17	6	2	1	9	39
Goodenough-Harris	14	11	25	6	1	1	8	0	2	0	2	35
Wechsler Preschool/Primary Scale of Intelligence (WPPSI) Performance	10	7	17	7	2	0	9	6	2	0	8	34
Arthur Adaptation Leiter	12	5	17	10	1	0	11	1	1	0	2	30
Columbia Mental Maturity Scale (CMMS)	6	1	7	14	1	2	17	0	0	1	1	25
Merrill-Palmer Scale of Mental Tests	8	5	13	5	1	2	8	0	2	0	2	23
Thematic Apperception Test (TAT)	7	5	12	2	0	1	3	0	2	2	4	19
Rorschach Test	5	5	10	1	0	0	1	6	2	0	8	19
Ravens Progressive Matrices	7	5	12	3	1	1	5	0	0	2	2	19
Peabody Picture Vocabulary Test (PPVT)	5	6	11	4	2	2	8	0	0	0	0	19
Frostig Developmental Scale of Visual Recognition	3	2	5	5	1	0	6	5	1	0	6	17
Metropolitan Achievement Test	9	1	10	4	0	1	5	1	0	1	2	17
Vineland Social Maturity Scale	5	3	8	2	0	0	2	0	3	3	6	16
Rotter Incomplete Sentences	5	4	9	3	0	1	4	0	1	0	1	14
Illinois Test of Psycholinguistic Abilities (ITPA)	3	1	4	6	2	0	8	0	1	0	1	13
Geist Picture Interest Inventory	9	0	9	1	0	1	2	0	0	2	2	13
Ontario School Ability Examination	3	6	9	4	0	0	4	0	0	0	0	13

Table 1. Tests in Rank Order

RANK ORDER OF ALL TESTS REPORTED BY RESPONDENTS (Continued)	SPECIAL SCHOOL			SPECIAL CLASS
NAME OF TEST	RESIDENTIAL	DAY	TOTAL	
Stanford-Binet Intelligence	3	4	7	2
Gates Reading Achievement	8	1	9	2
California Achievement	6	2	8	2
Cattell Intelligence Tests	0	5	5	0
Chicago Nonverbal Exam.	6	0	6	1
Children's Apperception Test (CAT)	2	0	2	1
Make a Picture Story	4	2	6	0
General Aptitude Test Battery	5	0	5	0
Gesell Developmental Schedules	1	3	4	0
Beery-Butenuka	0	1	1	3
Wechsler-Bellevue Intelligence Scale II	0	1	1	3
Benton Visual Retention	4	0	4	0
Minnesota Multiphasic Inventory (MMPI)	1	1	2	0
Gray Oral Reading	0	2	2	0
Sixteen Personality Factor Questionnaire	2	0	2	0
Snijders-Oomen Nonverbal Intelligence Test	0	1	1	1
Pintner-Paterson Scale	2	1	3	0
Denver Developmental	0	3	3	0
Preschool Attainment (Doll)	1	0	1	1
Smith Nonverbal Scale	1	0	1	1
Revised Beta	1	0	1	0
Calif. Mental Maturity	2	0	2	0
Symonds Picture Story Test	0	1	1	0
Porteus Mazes	1	0	1	0

Table 1. Tests in Rank Order

L TESTS NDENTS	SPECIAL SCHOOL			REGULAR SCHOOL				OTHER AGENCY				TOTAL ALL
	RESIDENTIAL	DAY	TOTAL	SPECIAL CLASS	PARTIALLY INTEGRATED	TOTALLY INTEGRATED	TOTAL	DIAGNOSTIC	SPEECH & HEAR- ING CENTER	REHABILITATION SETTING	TOTAL	
for nce	32	25	57	47	19	6	62	6	3	1	10	129
	21	19	40	34	5	3	42	7	3	2	12	94
	24	19	43	29	6	2	37	1	3	3	7	87
	31	10	41	18	6	3	27	6	3	2	11	79
est	3	16	19	30	3	2	35	5	2	1	8	62
	15	10	25	14	7	3	24	1	2	1	4	53
	27	10	37	8	3	0	11	0	0	2	2	50
	10	16	26	16	3	2	22	0	1	1	2	50
	8	5	13	12	3	2	17	6	2	1	9	39
	14	11	25	6	1	1	8	0	2	0	2	35
Scale ormance	10	7	17	7	2	0	9	6	2	0	8	34
	12	5	17	10	1	0	11	1	1	0	2	30
scale	6	1	7	14	1	2	17	0	0	1	1	25
tal	8	5	13	5	1	2	3	0	2	0	2	23
(TAT)	7	5	12	2	0	1	3	0	2	2	4	19
	5	5	10	1	0	0	1	6	2	0	8	19
	7	5	12	3	1	1	5	0	0	2	2	19
	5	6	11	4	2	2	8	0	0	0	0	19
of	3	2	5	5	1	0	6	5	1	0	6	17
est	9	1	10	4	0	1	5	1	0	1	2	17
le	5	3	8	2	0	0	2	0	3	3	6	16
	5	4	9	3	0	1	4	0	1	0	1	14
ic	3	1	4	6	2	0	8	0	1	0	1	13
ory	9	0	9	1	0	1	2	0	0	2	2	13
	3	6	9	4	0	0	4	0	0	0	0	13

Table 1. Tests in Rank Order (Continued)

RANK ORDER OF ALL TESTS REPORTED BY RESPONDENTS (Continued)	SPECIAL SCHOOL			REGULAR SCHOOL			OTHER AGENCY			TOTAL ALL	
	RESIDENTIAL	DAY	TOTAL	SPECIAL CLASS	PARTIALLY INTEGRATED	TOTALLY INTEGRATED	TOTAL	DIAGNOSTIC UNIT	SPEECH & HEAR- ING CENTER		REHABILITATION SETTING
NAME OF TEST											
Stanford-Binet Intelligence	3	4	7	2	3	0	5	0	0	0	12
Gates Reading Achievement	8	1	9	2	0	0	2	0	0	0	11
California Achievement	6	2	8	2	0	0	2	0	0	0	10
Cattell Intelligence Tests	0	5	5	0	1	0	1	1	1	3	9
Chicago Nonverbal Exam.	6	0	6	1	0	0	1	0	0	0	7
Children's Apperception Test (CAT)	2	0	2	1	0	2	3	1	1	0	7
Make a Picture Story	4	2	6	0	0	0	0	0	1	0	7
General Aptitude Test Battery	5	0	5	0	0	0	0	0	0	1	6
Gesell Developmental Schedules	1	3	4	0	0	0	0	0	2	0	6
Beery-Butenuka	0	1	1	3	1	0	4	0	0	0	5
Wechsler-Bellevue Intelligence Scale II	0	1	1	3	0	0	3	0	0	0	4
Benton Visual Retention	4	0	4	0	0	0	0	0	0	0	4
Minnesota Multiphasic Inventory (MMPI)	1	1	2	0	0	0	0	0	1	1	4
Gray Oral Reading	0	2	2	0	0	0	0	0	1	0	3
Sixteen Personality Factor Questionnaire	2	0	2	0	0	0	0	0	1	0	3
Snijders-Oomen Nonverbal Intelligence Test	0	1	1	1	1	1	0	2	0	0	3
Pintner-Paterson Scale	2	1	3	0	0	0	0	0	0	0	3
Denver Developmental	0	3	3	0	0	0	0	0	0	0	3
Preschool Attainment (Doll)	1	0	1	1	0	0	1	0	0	0	2
Smith Nonverbal Scale	1	0	1	1	0	0	1	0	0	0	2
Revised Beta	1	0	1	0	0	0	0	0	1	1	2
Calif. Mental Maturity	2	0	2	0	0	0	0	0	0	0	2
Symonds Picture Story Test	0	1	1	0	0	0	0	0	1	0	2
Porteus Mazes	1	0	1	0	0	0	0	1	0	0	2

He recommends:

1. It would seem desirable to have two sets of norms on the WISC so that a blind child might not only be compared with those of like handicap, but also with those with whom he must compete in the academic and vocational world (Hopkins & McGuire, 1966, p. 73).

2. A new test of general intelligence standardized on blind children is greatly needed. It would be advisable to pattern this after the WISC, but to modify the Comprehension and Similarities test along lines more suitable for blind children and to include a test of verbal reasoning and one of meaningful verbal memory (Gilbert & Rubin, 1965, p. 240).

It would appear that the normative measure has new and long overdue competitors. The Individual Achievement Monitoring System and criteria reference measures have been long overdue. But, to rid the world of evil and to name that evil "normative reference measures" would be unwise. What is needed are alternatives to current psychometric practices, among some of the more interesting are the use of electronic devices and automated procedures.

ISSUE #7: ARE CURRENT DIAGNOSTIC FINDINGS USEFUL IN PLANNING CURRICULUM?

The title to this section sounds self defeating, and it is offered as a question because the relationship between diagnosis and instruction means different things to different people. First, in all the aptitude-by-treatment interaction studies with which I am familiar, the so-called Hawthorne group seems to do as well as either one of the treatment groups. Let us look at that aptitude-by-treatment interaction data for just one moment.

This approach advocates that particular learning strengths can be specified by measuring or observing certain behaviors (aptitudes) displayed by handicapped children. Several contemporary special educators (Reynolds, 1963; Englemann, 1967; Bateman, 1969) have reported studies which demonstrate significant interactions between selected aptitudes and specific instructional interventions. McClurg (1970) notes that most instruction is initiated as "the classroom teacher must find the modality that seems to work best with each child." Most teachers have not, however, developed a systematic means of using psychometric or behavioral data based on observations to match curricular materials to instructional settings (Schiller & Deignan, 1969).

The concern for identifying a particularly strong modality as an aptitude by which handicapped children can learn most efficiently is not

a new one. Strauss (1947) attempted to fit instructional materials to the modality of greatest strength some thirty years ago. Gellner (1958) felt that the two primary modalities could be divided into the major information processing styles, visual and auditory, through which children learn. She advocated that children be divided according to strengths within modality functions and that highly specified teaching methods be applied to the children in these clusters. Wepman (1964), Bateman (1967), Werner & Kaplan (1963), and Sabatino, Ysseldyke, & Woolston (1973) have all referenced developmental discrepancies in modality growth and resulting variation in learning styles. Most educational theorists recommend that children be grouped for teaching on the basis of directing instruction to the strongest avenues for learning. To test this hypothesis, Sabatino & Dorfman (in press) went into seven (7) classes for educable mentally retarded children, selecting 116 children who were carefully screened for vision and hearing sensory deficits, gross motor problems (e.g., cerebral palsy, epilepsy), chronic school absence, or social-emotional adjustment difficulties. Following the screening procedures, the Beery-Buktenica Developmental Test of Visual-Motor Integration (DTVMI, 1967) and the auditory recognition subtest of the Test of Auditory Perception (TAP, 1969) were administered to ninety-three (93) children. The means, standard deviations, and standard error of measurement were computed for each measure (DTVMI and TAP) on the entire sample of children. All children were described as audile (A), visile (V), or non-preference (NP) subjects. An audile learner (auditory perceptual strength) was operationally defined as having a TAP score one standard deviation plus the standard error of measurement above the mean and a DTVMi score one standard deviation plus the standard error of measurement below the mean for the group. The reverse of the same procedures on the two instruments was employed to determine the visile subjects.

The visile and audile groups, as operationally defined on the visual perceptual aptitude as measured, were significantly different ($F=6.2$, $df=2/70$, $p .01$). As expected, the analysis of the aptitudinal data (utilizing Duncan's Multiple Range Test) obtained from the DTVMi indicated a statistically significant ($p .01$) difference between visile and none-preference subjects and between the visile and audile subjects.

A significant aptitude strength was also demonstrated between the auditory and other two groups ($F=4.17$, $df=2/70$, $p .05$) on the Test of Auditory Perception (TAP). Again, as with the visual perceptual measure, an analysis of the TAP data (utilizing Duncan's Multiple Range Test) revealed a statistically significant difference at the .05 level between visile (V) and audile (A) subjects. There were, however, no significant differences (.05) between audile and non-preference subjects on the TAP. Subjects not demonstrating definite perceptual modality strengths or weaknesses as operationally defined were designated non-preference. The non-preference subjects functioned in the mid-range between the mean and the first standard deviation (± 1 s.d.) on both perceptual tests.

Two treatment groups were established within each classroom. These two treatment groups contained audile, visile, and non-preference subjects randomly assigned to them on the basis of IQ scores, sex, and perceptual modality information. The purpose was to provide the two treatment groups, each comprised of the three subject cells--audile (A), visile (V), and non-preference (NP)--with an intensive visual and auditory perceptual intervention. The visual treatment group contained 10 audile learners, 13 non-preference learners, and 13 visile learners. The auditory treatment group contained 10 audile learners, 13 non-preference learners, and 18 visile learners.

Procedures

Instructional intervention was offered to 77 children placed into the three subject cells on a one-half hour daily schedule for each of the two groups receiving treatment for twelve full weeks. Thirteen (13) subjects distributed throughout the classes constituted a control group receiving no specialized intervention. The results from the control group are not reported in this study and may be obtained with data analysis on age and sex by writing the authors.

The instructional intervention scheduled for the morning of the first six weeks was re-scheduled for afternoons during the second six weeks, thus reversing the treatments to reduce any order effects. The curriculum which concentrated on the visual perceptual modality was the Sullivan Programmed Reading Series, revised by Buchanan & Sullivan Associates (1968). The curriculum representing a concentrated auditory perceptual approach was the Direct Instructional System for the Teaching of Arithmetic and Reading (DISTAR), Reading I, developed by Englemann & Bruner (1971).

The purpose of this study was to determine if two commercially prepared curricula, taught through the stronger of the two primary perceptual modalities, would significantly increase academic achievement. Two major postulates underlie this research. They are: (1) that visile children with measured visual perceptual strengths and auditory weaknesses would make significantly greater gains on academic achievement tests than would audile subjects following instructional interventions with commercial curricular materials received primarily through the visual modality; (2) that children with measured auditory perceptual strengths and visual perceptual weaknesses would yield significantly greater gains on academic achievement tests of reading skills following interventions with commercial materials received primarily through the auditory modality.

It was postulated that visile subjects would obtain statistically significant gains over audile on the academic achievement tests (PIAT word recognition and spelling subtests) after receiving the visual perceptual intervention (Sullivan). Research question number two

postulated that audile subjects would obtain statistically significant gains over the visiles when the intervention was transmitted primarily through the auditory treatment group (DISTAR). The absence of any significant aptitude-by-treatment interaction suggests that the first two research questions were unsubstantiated by the data.

Ysseldyke (1973) has identified many of the methodological problems which have contributed to the failure of most investigators working with aptitude-by-treatment interactions designs to produce significant findings. The major problems he has identified are: (1) a lack of reliability for the tests used to classify the aptitudinal strengths or weaknesses. For example, he summarizes Nunnally's (1967) statement that while a reliability of .50 to .60 is acceptable for instruments used for research purposes, the coefficient of .90 to .95 should be obtained when terminal or action decisions are necessary. Classifying children into high and low aptitudinal treatment groups may be, in fact, more of an action decision with the research components to follow. The test-retest reliability of the Beery-Buktenica Developmental Test of Visual Perception as reported by the test authors was .69. That factor alone may have caused some serious aptitudinal identification problems in this study. The distribution of measurement error, as reflected in the standard error of measure for any "true score" is certainly another problem, especially when the standard error measure is greater for one of the aptitudinal measures than for another. Ysseldyke (1973) writes ". . . before we are able to conduct aptitude-by treatment interaction investigations. . . we must demonstrate that we have developed or are able to develop reliable factorially simple measures" (p. 22-23). If it is true that most psychoeducational tests have neither sufficient reliability nor measured simple aptitudes or traits as specific learner strengths and weaknesses, then several basic requirements necessary for instituting an aptitude-by-treatment interaction design are in fact voided.

Bracht's (1970) review of 90 aptitude-by-treatment interaction studies produced only five studies with significant interactions. Among the 90 studies reviewed by Bracht, five of the studies did use handicapped children as subjects. None of these five demonstrated significant interactions. Two additional studies by Sabatino & Ysseldyke (1972) and Sabatino, Ysseldyk & Woolston (1973), with both learning disabled and educable mentally retarded children, failed to yield significant aptitude-by-treatment interactions.

In conclusion, the most concise implication that can be stated is that diagnostic-prescriptive teaching based on measurement of the perceptual modalities to ascertain auditory and visual perceptual modality strengths of educable mentally retarded children may well be a premature endeavor until further observations relating the importance of perceptual modalities to academic learning is better understood for handicapped children. The absence of significant aptitude-by-treatment interactions

in this study suggests that the two curricula approaches used are not superior, one to the other, for educable retarded children with relative measured perceptual strengths or weaknesses.

It would appear that we have very little validity for what we do diagnostically. In the Sabatino, Ysseldyke, & Woolston (1973) study, there were three treatment groups: audile, visile, and Hawthorne. The subject group receiving Hawthorne attention (e.g., playing Old Maid, Candy, Playland, etc.) performed just as well as did either of the two groups receiving a particular treatment, supposedly matched to diagnostic strengths.

ISSUE #8: LESS DEPENDENCE ON FORMAL ASSESSMENT: GREATER DEPENDENCE ON INFORMAL ASSESSMENT

Formal vs. Informal Assessment

Most educational psychology or measurement textbooks describe a process of formal assessment and one of informal assessment, the difference being that formal assessment is usually regarded as the administration of standardized tests and informal are teacher-made. In education, one of our problems has been that we have operated as if we believed that a set of rules exist which direct the flow of activities from formal diagnosis to instructional prescription preparations. It is my belief that this notion exists because we have used test results for years to make placement decisions about children. In other words, given the results of a formal test, we readily assigned children into this or that program. The efficiency of special class placement has received all the hearing it needs (Zito & Bardon, 1969). The psychologist functioning as a gatekeeper coupled to the belief that there was heterogeneity in children similarly labeled has, I believe, given way to a new search for broader special education support systems. There is little reason for me to further amplify this discussion because Dunn (1968) said it much better than I can when he succinctly sanctioned resource teachers "...20% of the better special education teachers should be prepared and re-employed as diagnostic-prescriptive teachers." Their role is to serve as go-betweens, joining formal assessment and instructional programming (instructional programming includes both placement and instructional or behavioral management decisions). There are no rules or procedural statements to guide the use of formal test results in the preparation of instructional prescriptions. The bridge that joins formal assessment to instructional programming is not intact. The only connecting link is the resource teacher. She is the first line of defense in deciding where a child should be or remain placed and what the initial and continuing instructional objectives should be. Furthermore, she is in the important position of being able to validate both the placement decision and the initial instructional objective, because she can enter into a relationship, through time, with other teachers and the child.

Informal Assessment

We have spoken of the process of informal assessment. Now, let's examine the context. Informal assessment is frequently viewed as either (1) an extension of formal assessment (a one-to-one assessment relationship with the child), or (2) a use of teacher-made tests. It is neither of the above. Informal assessment is a continuing instructional relationship. Questions, phrased as instructional and behavioral management hypotheses, are raised. Teaching methods are tried in order to determine those that work most efficiently and effectively as demonstrated in evaluation formats within specific educational environments.

To Test or Not to Test

There are two thoughts coming to a junction. I believe that they need some clarification. The problem is that an IQ score, word recognition and reading comprehension levels stated in grade equivalents is not an enormous amount of information. Formal assessment is frequently used to augment formal academic test results and to determine if the child knows upper or lower case letters, if he can match, say or hear sound/letter relationships in isolation as continual units/blends, or in words. This type of instructional assessment is a must, and it is usually one-to-one. When resource teachers or diagnostic specialists are working on informal assessment, it should be completed with other special class teachers (or regular class teachers) present as observers. Therefore, the major mission of the diagnostic specialist is to consolidate the information on a child, e.g., behavioral data, previous teaching history, social, medical, educational, and significant diagnostic findings from other disciplines, make personal observations especially in the interaction between the child and teacher (classroom climate) and initiate a workable curricula or behavioral management scheme following it up with appropriate evaluation. The question of to-test or not-to-test is really quite simple. If the information available and the observations made indicate that a specific instructional objective can be stated, no further resource teaching testing time is needed. Diagnosis - must do more than classify, it should indicate that specific academic or behavioral target areas are in need of management and provide the diagnostician an idea of what those management techniques might be.

Routine testing of every child, or the administration of routine testing by diagnostic specialists--the administration of the same tests to every child--is pointless; in fact, it is ecologically unsound in that it wastes the resource teacher's time, the students' time, and it destroys pine trees from which test forms are made. Tests have historically been misused in the schools. One classic example has been the administration of group tests to handicapped children. Most group tests of intelligence or academic achievement were not standardized on samples

of handicapped children, nor were they constructed to adopt or adapt for the disability--be it a reading problem or a motor, visual, hearing, or central language difficulty. The point is, most educational prescriptions cannot be prepared unless we know what the child has been taught, in what sequence, and with what result. The classroom environment, in its broadest sense, tells the story.

Classroom Climate

The verbal and non-verbal, more intangible (e.g., gesture, body language, etc.) types of interaction that occur between teacher and student and which establish the classroom climate have been well reported on in the research literature. Fink (1970) called for systematic and precise analyses of special class environments, providing a procedural format for such efforts. A review of his well-developed scheme is presented to assist us in understanding the nature of systematic observation.

Teacher Categories:

Three task categories are defined, each of which reflects a different process of involving students in task activities: unilateral direction giving, induced student participation, and feedback. Teacher nontask, or control categories, are viewed as having five dimensions. One is a covert response set; four are overt response sets. One additional category is reserved for "no interaction."

The covert response set comprises two categories, planned ignoring, which is viewed as a positive control technique, and incapacity. The first of the four overt response groups of categories is seen as a series of verbal control actions on an authoritative-interpretive continuum. Thus, at one extreme, the category authoritative represents verbal interpretation that limits pupil participation. It represents teacher behavior that is commanding, rationalizing, and critical. At the other extreme, the causal category reflects verbal interaction which actively engages the student in the consideration and solution of a problem. Commonly, this means the use of life-space interview techniques. Between the extremes, three categories are used: change tone, which primarily reflects the use of humor to effect behavior change; appeal to value/law, designed for the control technique which resorts to established rules and values; and surface behavior response, which deals with behavior at a minimally interpretive level.

The second group of overt response categories is designed for behavior which involves physical or spatial manipulation of students or their surroundings. This includes exclusion of students from class, the use of "quiet rooms," internal physical or personal rearrangement of students in relation to each other or the teacher, or the teacher's

own manipulations, such as words, smiles, and gestures. Lower order incentives used for control of deviant behavior are tallied in the reward and punishment categories. These statements may be explicit or implicit and either oriented to the future or the present. The fourth overt response group accounts for the use of task expectations or activities which refocus attention on the current task as a means of deviant behavior control.

Pupil Categories:

Pupil Categories were developed on the basis of the assumptions operative within the teacher categories. Nontask activities are considered along a number of dimensions. These include the nonaggressive acts contained within self involvement as well as generalized verbal and physical interaction. Aggressive acts are characterized in four ways: verbal aggression, physical aggression, generalized disturbing, and refusal/resistive. Verbal and physical interaction and aggression are further subdivided according to whether the behavior is directed towards self, peers, or teachers.

Craig & Collins (1970) provided a description of observations for classes of hearing impaired children. They write that the observation of the communicative behavior of teachers and pupils is considered to be one of the most exciting and promising methods of improving the instruction and learning. Interaction analysis is one technique which has been developed as a technique providing relatively compact records focusing on the interactions rather than on the exact meaning of what they say. They listed three objectives of interaction analysis classes for the deaf:

1. To develop a system for making systematic observations of classroom communicative interaction between teachers and their deaf pupils and between each deaf student and the other members of the class.
2. To provide guidelines to record and analyze communicative interactions in classes for the deaf.
3. To suggest applications in the development of communication skills, language facility, and general educational attainment of deaf students.

Craig & Collins (1970) used Flanders' (1965) model to serve as a design adopted specifically for application in classrooms for deaf children. Somewhat traditional or expected categories such as informing and questioning (verbal) were included. The nonverbal nature of much of the communication of deaf persons was also considered, and the development of the mode categories seemed to facilitate the description of how thought is communicated.

Twenty categories of communication were developed with 9 classifying teacher initiated communication, 9 classifying student initiated communication, and 2 dealing with lack of communication. Categories 1 - 9 classify teacher initiated communication:

1. Acceptance: accepts feelings of the child in non-threatening manner, praises the child's behavior, encourages child to continue.
2. Development: accepts or uses a child's idea or thought by clarifying it, building it, or relating it to other ideas.
3. Questioning: asks a question about an idea, event or behavior, intending the child to respond to the questioning.
4. Demonstration: shows the child physically or graphically how a task should be performed.
5. Informing: gives the child information about things, events, and ideas.
6. Directing: indicates to the child what he is or is not to do.
7. Feedback: indicates in a nonthreatening manner to the child that his behavior or ideas are correct or incorrect, desirable or undesirable.
8. Criticism: indicates to the child that his behavior or ideas are not acceptable and that he is expected to change them; justifies teacher authority.
9. Response: child communicates a response to a communicative stimulus given by the teacher.
10. No communication: indicates no communication is occurring between teacher and child.

Categories 11 - 19 classify student initiated communication: Categories 11 - 18 deal with the students' expressive communication techniques, and category 19 deals with the teacher's response to these initial messages. In category 20, Confusion, both teacher and child communicate expressively and neither attempts to communicate receptively.

Eleven modes of communication were included as part of the observation system used in this study. They are described below:

Combined (C): two or more of the following modes used together, not necessarily simultaneously.

Dactyl (D): the hand and fingers are employed to form letters of the alphabet. Words, groups of words, or complete sentences may be spelled manually to convey a unit of thought.

- Demonstration (Dm): showing how an event or action occurs or how a task should be performed.
- Dramatization (Dr): role playing; acting out a story, event, or idea.
- Evasive action (E): deliberate behavior designed to ignore communication. (Example: closing the eyes, averting the head.) Demonstration of ignoring the other person is inherent.
- Gesture (G): natural gestures easily understood in the context of a particular situation. (Example: waving "bye-bye," forming a cup with the hand and going through the motions of drinking for "water.")
- Kinesthetic (K): using the sense of touch to gain meaning, such as the deaf child placing his hands on an adult's face to feel the muscular movement of a properly produced speech sound.
- Manual (M): the formal sign language utilized by a number of deaf persons.
- Mechanical (Me): use of mechanical device or instrument such as a slide projector or overhead projector.
- Oral (O): speech
- Written (W): written or printed English.

Werry & Quay (1969) have also developed an observational instrument.

Appendix

Instructions for Obtaining a Frequency Count on Deviant Classroom Behavior

Classroom Situation for Observing

Observing should be done in a task situation where the rules are clearly defined. In general, this will be during individual, academic seat work. Activities such as story time and most group situations generally prove unsuitable because rules tend to be relaxed and unclear. Observations should not be done when there is a prolonged period of individual instructions during which the teacher is seated beside the child, since this tends artificially to minimize deviant behavior.

Observing Procedure

The observer must seat himself close enough to the child to be able to hear what the latter is saying and to see what he is doing on his desk without the observer making himself obtrusive. The observer must not interact with the child or the class in any way.

Observe the child (one at a time) for 20 seconds and then rest for 10 seconds during which the appropriate symbols can be entered in the cells of the score sheet. Behaviors occurring during this 10 second period are never recorded. Thus there are two observations per minute. Presently there are 30 separate cells of observation, thus taking a total observing time of 15 minutes. Timing must be exact. There is no objection to splitting the observations (i.e., part before recess and part after recess).

The scoring sheet should consist of 30 cells subdivided in half by a dotted horizontal line.

Definitions of Observations

There are three classes of observations: deviant behavior, on task behavior, and teacher contact.

1. Deviant behavior (scored above the dotted line). this is defined as any behavior which contravenes any explicit rule under which the class or individual child operates. Therefore, it is imperative to determine what the rules are in a given classroom before undertaking any observations. The observer should question the teacher particularly

about conditions under which it is permissible for a child to leave his seat and to speak. When there is any doubt about a particular behavior, mark it nondeviant.

Only one symbol of the given type should appear in a cell though it is permissible to have as many different symbols in the one cell as necessary.

It is helpful to record the deviant behavior as they occur rather than waiting for the end of the observation period to write these down. If the on task item (see below) is left for the 10 second "off" period there will be little danger of getting cells muddled.

Definition

Symbol and
Description
X
Out of seat


This is defined as any situation in which the normal seating surface of neither buttock is applied to the child's seat or in which there is movement of his desk or chair so that its ultimate stationary position is altered (thus swinging a seat on its axis or tilting a chair on its legs is excluded). Where the child is performing a permitted out of seat activity such as sharpening his pencil (after having gotten permission from the teacher) this would not be marked as out of seat behavior except (a) when deviant behavior occurs during the permitted act such as "side trips", looking at things on the teacher's desk, stopping to talk, etc., or (b) when the permitted activity is prolonged beyond a reasonable period of time or altered in some significant way.

————→
Physical Contact or
Disturbing Others
Directly

Any physical contact initiated or reciprocated between the child under observation and another person independent of the intent of the child (aggression or affection). Include here physical contact made with another person by means of an object such as a book held in a hand or an object thrown, or some disturbance of another person or body but rather with objects about him such as his work, his desk, etc. Examples: grabbing objects or work, knocking objects off the other's desk, destroying his property or pushing his desk.

N
Audible Noise

Any nonvocal, nonrespiratory noise which is clearly audible, and which is not an integral part of a nondeviant activity. Examples: tapping a pencil, clapping, tapping feet, rattling or tearing papers, throwing a book on a desk, slamming a desk closed, etc.


90 Degree Turn,
Seated

A child must be seated and the turn of the head and/or body must be more than 89 degrees. The desk is used as a reference point. Exception is when the child wishes to attract the teacher's attention and turns, raising his hand to attract attention. A helpful guide here is if the head is parallel to the shoulders, or if the child or other person looked at is beyond the 90 degree arc, the turn must be in excess of 89 degrees.

V
Vocalization

A vocalization or other respiratory noise such as a whistle which is not task related and which is not physiological (this includes normal cough or sneeze). Examples: answering teacher without first raising hand, talking to others without permission, muttering obviously for an audience, swearing, etc. Do not rate as V behavior which is a direct response to a teacher's question or, in general, when a teacher is with the child except where the content of what is said is clearly deviant, such as stating refusal to do work, putting off obeying instructions, swearing, etc. Do not include working out loud.

I
Isolation (i.e.,
for deviant
behavior)

The child has been sent out of the room as a punishment or has been placed in the time-out room. The appropriate below the dotted line (i.e., on task-off task) symbol in such cases is //; other deviant behaviors which can be noted such as vocalizations and noises should be recording along with the I.

Ø
Other Deviant
Behaviors

Include here behaviors which do not fit easily into a category above and also behaviors which are situational rather than absolutely deviant. For example, engaging in a task other than that which is assigned (reading instead of doing arithmetic, drawing instead of reading, etc.). Include here also daydreaming. The following are not deviant behaviors: playing with clothes, playing with self, chewing gum, playing with pencil in hand (all other pencil activities such

as propping desk up with a pencil or taking a ballpoint pencil to pieces, stubbing the point heavily on wood, etc., are deviant).

2. On task-off task activity (scored below the dotted line). This is defined as an attempt to assess the child's attention to the designated task material. Attending is defined as the eyes being applied to the task material or to the teacher for a period of not less than 15 out of this are when the child can be easily seen to be on task even though his eyes are off his work; for example, counting on his fingers, working out loud, etc. It should be noted that while it is possible for deviant behavior--particularly disruptive noises such as tapping the foot or deviant behaviors of short duration (less than 5 seconds)--to be recorded and yet the child may still get an "on task" check, the converse--being off task without some deviant behavior being noted above the line--cannot occur. In general when in doubt put a Ø above the line.

//
Activity while engaged in some other activity which is either clearly deviant or not the assigned one for more than 5 seconds.

Sometimes this will become apparent only after some time has elapsed as for example when the teacher comes up and admonishes the child for doing other than that which is assigned. In such circumstances the incorrect cell should then be corrected.

D
Daydreaming--here the child is off task for more than 5 seconds but does so by daydreaming or staring into space rather than some active endeavor.

This type of behavior is very uncommon in conduct problem children.

3. Teacher contact (scored below the line). Teacher is defined as any adult person who is interacting with the children rather than just observing them. Any contact between teacher and child whether initiated by child or by teacher is scored here. This would include such obvious contacts as talking to the child but also less

obvious ones such as gesturing or turning the child's clock on or off. It is permissible to have only one teacher contact noted in a cell.

Symbol and Description

T	Teacher initiated contact (no instigation on part of child)
t	Child initiated (include both questions, etc. Add teacher responding to deviant behavior)
T & t	Positive contact (judged by what teacher does)
<i>T</i> & <i>t</i>	Negative contact (Note: <i>T</i> ought not to occur!)

Note: Recording something above the dotted line for Deviant Behavior and something below it for on task behavior are obligatory for every cell. Teacher contact is of course added only when it occurs.

(Craig & Collins, 1970)

The foregoing procedures are means of obtaining information in the classroom. There is no magic to these techniques, and my sole point in acquainting you with them is to provide you with information relevant to obtaining systematic observational data from the classroom. Possible even more important than classroom interaction analysis, or at least a formal means of obtaining that information, is the aspect of getting into the classroom to see what is being taught there. The relationship with that teacher is critical for several reasons.

ISSUE #9: A MORATORIUM ON PSYCHOLOGICAL REPORTS, UTILIZATION OF PROFILES INSTEAD OF WRITTEN REPORTS

Holt (1958) points up quite vividly the problems in the use of language to describe a handicapping condition. His particular example is the word "spastic" which may reflect abnormal reflex with no disability, while another spastically invoked child may be immobilized due to quadriplegia.

Several studies have determined that the consumers of written reports interpret the means of these written documents to mean something quite different than the writer meant. To overcome this difficulty, Holt has suggested a classification system for handicapped. This system requires that nine areas of behavioral function be specified. The reports can be quickly profiled. Figure 1 demonstrates the behavioral descriptors and classification system used. (See Figure 1.)

It has been determined that the correlation between function and acuity is not absolute or even a moderate one. Barrage (1963) has reported data that indicates that the visual function of a blind child can be increased through training. Studies with the hard-of-hearing showed that residual hearing can be effectively trained, resulting in increased word discrimination power.

Bateman (1965) has developed a chart for evaluating the behaviors that should be evaluated for blind children. (See Figure 2.)

Jones (1962) states that visual acuity alone is not a reliable criterion for defining or placing visually handicapped children. The functional characteristics of children with limited vision are the contributors to what the visual limitations are and the extent and degree of the educational handicap.

The National Regional Resource Center for Pennsylvania and the Tyrone Model Learning Disabilities Systems have developed useful reporting forms of profiling psychological, sensory screening, academic,

Figure 1

Section	Grade	Significance
P (Physique)	1 No deformity No reduction of exercise tolerance Medical supervision not required	This section indicates general physique, exercise tolerance and for children at school, attending centers, or in institutions, some indication is given of the need for medical supervision.
	2 Some deformity or reduced exercise tolerance, occasional medical care needed	
	3 Deformity or reduced exercise tolerance or both Possibly frequent infections Needs frequent medical care	
	4 Completely disabled. Possibly bed-or chair-ridden	
U (Upper limbs)	1 Able to feed, wash, dress self Can handle pencil and pen	This section indicates the possible need for physiotherapy and in a class the teachers will know the number of children needing help with dressing and feeding.
	2 Assists with feeding, dressing, and washing but needs help to complete task	
	3 Needs complete supervision for feeding, washing, and dressing	
	4 Arms are useless and cannot hold objects	
L (Locomotion)	1 Able to walk, run, go up and down stairs and climb	This section indicates possible needs for physiotherapy, orthopaedic appliances, special carriages. It may help when the family are advised about housing. It indicates the possible need for conveyance to school.
	2 Can walk and possibly run but needs help to go up and down stairs	
	3 With help can take a few steps or walk a short distance	
	4 Unable to walk even with help	

Figure 1 continued

H
(Hearing)

- 1 Normal hearing
- 2 Partially deaf: with some help can make satisfactory progress in ordinary school
- 3 Partially deaf; unable to progress in ordinary school
- 4 Severely or totally deaf

These grades correspond closely to those already in use and recommended by the Board of Education (1938). Their Grade 1 would be included in 1, their 11a as 2, their 11b as 3 and their Grade 111 as 4.

E
(Eyes)

- 1 Normal vision. No strabismus
- 2 Partially sighted but with help able to make progress in ordinary school
- 3 Partially sighted and even with help unable to progress in ordinary school
- 4 Blind

The grades used here correspond very closely with those formulated by the Ministry of Education (1945). They have similar significance with regard to training.

S
(Speech)

- 1 Speaks well; no speech defect, can relate a simple story
- 2 Speech of short phrases, possibly with speech defect
- 3 Single words or sounds to indicate wants, possibly speech defect of such severity that understanding is difficult
- 4 No words, meaningless sounds

This section is closely linked with that of I (Intelligence). It is included to indicate those children who might be helped by speech therapy, those who may have difficulty conveying their wants and it may possibly indicate the need for investigation of hearing.

T
(Toilet)

- 1 Attends to self, dry at night
- 2 Asks for attention, needs some help, may be wet at night
- 3 Accidents with wetting, but control of bowel
- 4 Doubly incontinent

This section indicates to teachers the degree of attention to be given to the child. It also allows those children to be selected who cannot be handled at a centre because of defective toilet control. The parents of older children in Grades 3 and 4 may have a lot of expense replacing clothing and bed linen.

Figure 1 continued

I
(Intelligence)

- 1 Normal (average) intelligence
- 2 Educationally subnormal
- 3 Ineducable but trainable
- 4 Untrainable, complete ament

Grade 4 corresponds approximately with the classification of idiot at present in use, or of severe subnormality as recommended in the World Health Organization (1954). In the other grades something can be achieved by training and from the profiles of the children the numbers for whom provision is necessary can be obtained.

B
(Behavior)

- 1 Normal
- 2 Abnormal, but adjustment possible in home environment
- 3 Abnormal, adjustment not possible in home environment
- 4 Seriously abnormal; needs specialist care

Behavior problems are common in normal children and even more common in those who are handicapped. This section indicates those families where the child and the parents need special help and some indication is given by the grading as to whether this should be at home or elsewhere.

(Holt, 1956)

Figure 2

Evaluation of Blind Child

Test and Observation Data	Psychological Evaluation	Decision-Making or Recommendations
Language Speech present Speech echolalic Auditory comprehension Auditory memory Grammar & syntax Etc.	1. Determination of area concern (Column 3). Exactly what is to be evaluated and for what purpose? 2. Choosing best instruments and techniques available (Column 1) in order to check the relevant areas of function. 3. Properly interpreting the data obtained in step 2, in order to make appropriate recommendations.	Type of nursery school School readiness Speech correction Braille vs. print Continuance in public school Placement as multiply handicapped Removal from home Parent counseling Need for travel training Etc. (These are illustrative only)
Mobility Motor coordination Strength Attitude toward mobility Sound localization Etc.		
Tactile Sensitivity Discrimination Recognition Memory Attitude toward exploration		

(Bateman, 1965)

and speech and language information. The advantages of such a profile are:

1. Time saved in preparing long reports.
2. Less inconsistency in the meaning of information reported when a profile is used over a written report.
3. A baseline is established upon initial assessment which can be used to identify target behaviors.
4. Normative or criterion referenced measures of a target behavior permit a plot of the growth factor from the baseline for a particular intervention.
5. The use of a profile forces conferences and inservices to explain the meaning of terms used on the graphic ledger. Consistency in language leads to consistency in understanding.

Rusalem (1970) points out that for years there was no need to have tests or testing to differentiate the aptitudes of the visually impaired. They were merely "shoe-horned" into programs. The rapid growth of habilitative and rehabilitative efforts with the blind have given rise to the need for greater specificity in diagnosis. Hausserman (1958) has confronted the issue of assessing the multiply handicapped with great clarity. She remarks that the child with sensory limitation must become secure with his new environment before accurate measures can be obtained, and that normal circumstances do not permit a child to obtain that security upon an initial visit. I have known a pediatric dentist who has children come into his office, sit in the chair, and he produces an automated slide show on dental techniques. Then he sends them home. He doesn't attempt to say "open" in that initial visit. The audiometric chamber, the new table top, may be insecure places for sensory impaired children, but we make little effort to become sensitive to the child's familiarity and security in a situation. In fact, in reading psychological reports prepared by students, I have forbid them to use the term "rapport." Generally that means the child established a relationship. That concept is wrong, as the child interacts with varying environments differently. Our job is to capture a different set of observations for the environment that he is in at a given time. That is why I can't imagine having reports around that are over 6 months old. In fact that is a long time, depending upon the intervention, if any, being presented.

More importantly, if a young deaf child is to appear on a certain date at a central point for assessment to determine where and what type of training he should receive, how do we know what we are measuring or observing on that given day? Mira (1972) reports tremendous changes in target behaviors through parent participation in using behavioral

modification at home with young deaf children. Layman (1974) describes a pre-school program in Heister Elementary School in Harrisonburg, Virginia, where learning and hearing impaired children are brought together in a nursery school setting which serves as a language diagnostic arena.

Stein & Green (1972) have directed attention to the problems in placing deaf-blind children when inadequate documentation of favorable behavioral change is not available. Curtis & Donlon (1970) have developed a telediagnostic procedure to obtain micro-encapsulation of behavioral situations through time. Tweedie (1974) has found that observers need very little training to successfully use scales such as the one shown:

Rating Form* Used in the Data Collection

Micro-encapsulation

Communication	Liability									Asset
1. auditory reception	1	2	3	4	5	6	7	8	9	
2. visual reception	1	2	3	4	5	6	7	8	9	
3. tactile reception	1	2	3	4	5	6	7	8	9	
4. gustatory/olfactory reception	1	2	3	4	5	6	7	8	9	
5. object centered communication	1	2	3	4	5	6	7	8	9	
6. people centered communication	1	2	3	4	5	6	7	8	9	
7. tactile/motor expression	1	2	3	4	5	6	7	8	9	
8. oral expression	1	2	3	4	5	6	7	8	9	
Adjustment										
9. cooperativeness	1	2	3	4	5	6	7	8	9	
10. manageability	1	2	3	4	5	6	7	8	9	
11. independence	1	2	3	4	5	6	7	8	9	
12. attentiveness	1	2	3	4	5	6	7	8	9	
13. flexibility	1	2	3	4	5	6	7	8	9	
14. persistence	1	2	3	4	5	6	7	8	9	
15. physical activity	1	2	3	4	5	6	7	8	9	
16. curiosity	1	2	3	4	5	6	7	8	9	
Learning										
17. attention span	1	2	3	4	5	6	7	8	9	
18. self-concept	1	2	3	4	5	6	7	8	9	
19. sense of humor	1	2	3	4	5	6	7	8	9	
20. mobility	1	2	3	4	5	6	7	8	9	
21. coordination	1	2	3	4	5	6	7	8	9	
22. sensory discrimination	1	2	3	4	5	6	7	8	9	
23. spacial orientation	1	2	3	4	5	6	7	8	9	
24. eye-hand coordination	1	2	3	4	5	6	7	8	9	

*This form is a modified version of the scale developed by Curtis and Donlon (1972).

Jones & Byers (1971) have noted that hearing impaired children seen in routine caseload at clinics compensate in a number of ways for the hearing problem, making the hearing deficit a poor predictive variable for academic performance. They note that the critical evaluation point is the child's ability to adjust to the total academic environment. They have developed a four-point classification structure based on psycholinguistic skills in an assessment classroom setting.

It appears to me that an assessment class, or a setting where children with difficult-to-diagnose problems can be maintained and studied in a classroom teaching environment, is necessary. The purpose of an assessment class is to focus the attention of the diagnostic support team (multidisciplinary diagnostic team) on a child when placement or curriculum decisions are difficult. It seems to me an impossibility to assess every child on a one-shot approach. For that reason, the Model Learning Disability Systems has constructed assessment classes in the continuum of services and programs that range from assessment by a multidisciplinary team to resource programming with criterion referenced monitoring.

ISSUE #10: THE NECESSITY FOR A NATIONALLY ADAPTED DYNAMIC PROCESS TO ELIMINATE ONE SHOT DIAGNOSTIC STUDIES, REQUIRING A BASE-LINE ON ALL HANDICAPPED CHILDREN OF AT LEAST ONE YEAR, WITH COMMONLY AGREED UPON BEHAVIORAL DESCRIPTORS.

Lovitt (1967) writes:

"The diagnostician is concerned not only with the reliability of baseline performance, but also with the validity of his evaluation. In behavioral diagnoses, a valid measure of performance is provided through objective observations of behavior, for example, direct analysis of reading or attention span, rather than subjective inferences of behavior (indirect assessment through the use of standardized tests)." (p. 234)

A quick review of the litigation occurring on inappropriate classification of children, evidences the misuse of tests to assess a child, instead of describing a behavior.

The blending of normative reference measures with criterion reference measures should alleviate the heavy dependence placed (inappropriately for the most part) on normative reference measurement.

In only then, we could have an agreed upon set of descriptors and diagnostic procedure, how far we could advance the state of the art. Is such a notion whistling in the wind? I don't believe so. It is primarily an attitude that prevails that diagnosis is a sacred cow, and

them that do it must not be disturbed or the mystic they practice will be spoiled. The very use of the one shot diagnosis is the search for causation, as if symptom sorting will illuminate the prime mover or causative factor, and once it is undone, all else will follow.

In 1954 Meehl summarized the controversy between Clinical and Statistical Prediction. The argument ranges between those who say that only qualitative (or clinical) information, gathered by observing the patient and by interviewing him, his family and friends, is necessary for accurate diagnosis. Others argue that test scores alone will be a more accurate diagnostic procedure than the subjective impressions of interviews and observations. In studying the reported studies to date, Meehl (1954) concluded that clinical prediction or diagnosis fared less well or about equal to quantitative diagnosis. Gough (1962) and Hunt and Jones (1962), in later reviews of the efficiency of clinical and statistical diagnostic techniques, also found that most often the clinical approach falls short of, or is no better than, the statistical formula approach. Other authors, such as Holt (1958) and Harris (1963), view these approaches as being complementary. After comparing the three techniques of (1) clinical only; (2) statistical only; and (3) clinical and statistical combined, Harris (1963) concluded:

"The much-debated issue at hand seems to be whether judgment based on broad experience, sound inference, and a reflective weighing of alternative points of view can achieve or exceed the accuracy of prediction based on quantification of relevant aspects of present and/or past behavior. Those who incline toward the quantitative point of view argue that the human intellect is incapable of sorting, combining, and weighing information with the efficiency of a statistical formula tailored for use in an electronic computer. Those who have greater faith in judgments of the human mind are usually willing to concede the superior efficiency of a numerical statement, but would point out that only limited aspects of complex problems in which human behavior is the focus of the study can be easily quantified. If formal quantitative reasoning can only partially solve a problem, then qualitative assessment, based on supplementary nonquantified information, intuition, and experience, must be introduced to fill the void (pp. 324-35)."

Hamill (1971) adds that the goal of observation should be "... to expand, probe, verify, and, if need be, discard the conclusions and recommendations of formal assessment (p. 348)," formal assessment being standardized testing.

All of these arguments assume diagnosis is a label, and the only opposite to so called formal observation is a score that can be obtained by a technician. It is my belief that with modern high speed

computers, that basic measurement of agreed upon human function can be obtained in a systematic procedure by using the taxonomy that the Council on Exceptional Children (CEC) started. Then developing a set of descriptor processes that could be agreed upon by special educators for all states, coordinated by the Coordinating Office for Regional Resource Centers (CORRC), using Regional RRC's to teach all school personnel in each state to use that system. The National Center for Educational Media and Materials would use the descriptors in its need surveys, and the Area Learning Resource Centers and Special Offices would store, catalog, and prepare descriptions of all existant print and non-print material according to close descriptors. Thus a National system could be developed that has the following characteristics:

1. It relieves diagnostic pressures by - permitting the use of technically gathered test data.
2. Regional (state and district) computer programs can be developed to score and profile data so received.
3. That data then has a common meaning to all that use it, and it promotes inservice training in the use of its meaning with all types of educators and allied professions.
4. A systematic view of the learner results, which permit us to develop new needed observational methods.
5. A systematic view of the learner permits a total view of his skills, and behaviors, necessary to achieve a particular function. That view greatly eliminates current hit or miss psychometrics.
6. By systematically describing human function, a national system that can be interchanged geographically, is developed.
7. Research on learner aptitudes can be given a standard meaning.
8. A systematic description of teaching methodology could be described, stored, and made available to given geographic locations.
9. Communication and coordination of National efforts can be undertaken, because we will all be talking a common language.
10. In essence, we could begin to direct National energies at knowing the members of handicapped, their problems, and now described, to fix the professional man power needed, programs by type necessary, creative alternatives to program development, and systematic broad group support and research efforts.

All this if we could just become systematic in the use of a diagnostic process based upon a usable and commonly accepted taxonomy of behavioral descriptions and academic/vocational task analyses.

REFERENCES

- Abeson, A. A continuing summary of pending and completed litigation regarding the education of handicapped children. Council for Exceptional Children, 1973, 6.
- Aikins, M. C. Evaluation theory development. Evaluation Comment, 1969, 2, 2-7.
- Auxter, D. Learning disabilities among deaf populations. Exceptional Children, 1971, 37, 573-577.
- Barraga, N. C. Effects of experimental teaching on the visual behavior of children educated as though they had no vision. Unpublished doctoral dissertation, George Peabody College for Teachers, 1963.
- Bateman, B. An educator's view of a diagnostic approach to learning disorders. In J. Hellmuth (Ed.), Learning disorders. Vol. I. Seattle: Special Child Publications, 1965.
- Bateman, B. Implication of a learning disability approach for teaching educable retardates. Mental Retardation, 1967, 5, 23-25.
- Bateman, B. Reading: A controversial view, research and rationale. In L. Tarnopol (Ed.), Learning Disabilities; Introduction to educational and medical management. Springfield, Illinois: 1969.
- Bordley, J. E., Hardy, W. G., & Hardy, M. P. Pediatric audiology. Pediatric Clinics of North America, 1962, 9, 1147-1158.
- Bower, E. M. The significance of the public school in shaping the life of the child. Address on mental health, Wheeling, West Virginia, November 1965.
- Bowlby, J. Separation anxiety: A critical review of the literature. Journal of Child Psychology and Psychiatry, 1961, 1, 251-269.
- Bracht, G. H. Experimental factors related to aptitude-treatment interactions. Review of Educational Research, 1970, 40, 627-645.
- Clark, G. Career education for the mildly handicapped. Focus on Exceptional Children, 5, 1974.
- Craig, W. N. & Collins, J. L. Communication patterns in classes for deaf students. Exceptional Children, 1970, 37, 283-289.
- Cronbach, L. J. Essentials of psychological testing. (2nd ed.). Gardner Murphy (Ed.). New York: Harper Brothers, 1960.

650

- Cronbach, L. J. Course improvement through evaluation. Teachers College Record, 1963, 64, 674-683.
- Curtis, W. & Donlon, E. The development and evaluation of a video tape protocol for the examination of multihandicapped deaf-blind children (Preliminary report: Communication protocol). Research report, Syracuse University, Syracuse, New York, 1970.
- D'Alonzo, B. & Mauser, A. Programming for the high school age educable mentally retarded: An emerging model. Contemporary Education, 1973, 44, 275-280.
- Dunn, L. Special education for the mildly retarded: Is much of it justifiable? Exceptional Children, 1968, 35, 5-22.
- Englemann, S. Relationship between psychological theories and the act of teaching. Journal of School Psychology, 1967, 2, 93-100.
- Fink, A. H. An analysis of teacher-pupil interaction in classes for the emotionally handicapped. Unpublished doctoral dissertation, University of Michigan, 1970.
- Flanders, N. A. Teacher influence, pupil attitudes and achievement. Washington, D.C.: United States Government Printing Office, 1965.
- Flint, B. M. The security of infants. Toronto, Canada: University of Toronto Press, 1959.
- Furth, H. G. & Mendez, A. The influence of language and age of Gestalt laws of perception. American Journal of Psychology, 1963, 76, 74-81.
- Gellner, L. Teaching devices for children with impaired learning. Columbus, Ohio: The Parents' Volunteer Association, 1958.
- Goldfarb, W. Psychological privation in infancy and subsequent adjustment. American Journal of Orthopsychiatry, 1945, 15, 247-255.
- Goodhill, V. Rh Child: Deaf or "aphasic"? Clinical pathological aspects of kernicleric nuclear "deafness." Journal of Speech and Hearing Disorders, 1956, 21, 407-410.
- Gough, H. G. Clinical versus statistical prediction in psychology. In L. Postman (Ed.), Psychology in the making. New York: Knopf, 1962.
- Hammill, D. D. Evaluating children for instructional purposes. Academic Therapy, 1971, 6, 341-353.
- Hammond, R. Context evaluation of instruction in local school districts. Educational Technology, 1969, 9, 13-18.

- Hardy, J. H., Monif, G. R., & Sever, J. L. The lack of association between the appearance of complement fixing antibodies and the recovery of virus in a child with congenital rubella. Pediatrics, 1967, 39, 289-290.
- Hardy, W. G. & Pauls, M. D. Atypical children with communication disorders. Children, 1959, 6, 13-16.
- Harris, J. G., Jr. Judgment versus mathematical prediction: An investigation by analogy of the clinical versus statistical controversy. Behavioral Science, 1963, 8, 324-335.
- Hauesserman, E. Development potential of pre-school children: An evaluation of intellectual, sensory and emotional functioning. Grune & Stratton, Inc., 1958.
- Holt, R. R. Clinical and statistical prediction: A reformulation and some new data. Journal of Abnormal and Social Psychology, 1958, 51, 1-12.
- Hunt, W. A. & Jones, N. F. The experimental investigation of clinical judgment. In A. J. Bachrach (Ed.), Experimental Foundations of Clinical Psychology. New York: Basic Books, 1962.
- Hartung, J. E. Visual perceptual skill, reading ability, and the young deaf child. Exceptional Children, 1970, 36, 603-608.
- Iscoe, I. The functional classification of exceptional children. In E. P. Irapp & P. Himmelstein (Eds.), Readings on the exceptional child. New York: Appleton, 1962.
- Jones, J. W. Problems in defining and classifying blindness. New Outlook for the Blind, 1972, 56, 115-121.
- Jones, C. & Byers, V. W. Classification of hearing impaired children in the classroom: A theoretical model. Journal of Learning Disabilities, 1971, 4, 46-49.
- Jones, R. L. Accountability in special education: Some problems. Exceptional Children, 1973, 39, 631-642.
- Kagan, J. & Moss, H. A. Birth to maturity: A study in psychological development. New York: Wiley, 1962.
- Kahn, A., Kamerman, S. & McGowan, B. Child advocacy: Report of a national baseline study. New York: Harper & Row, 1970.
- Knitzer, J. Advocacy and the children's crisis. American Journal of Orthopsychiatry, 1971, 41, 799-806.

- Knoblock, H., Rider, R. J., Harper, P. A., & Pasamanick, B. Neuro-psychiatric sequelae of prematurity: A longitudinal study. Journal of American Medical Association, 1956, 161, 581-585.
- Knox, H. A. A scale based on the work at Ellis Island for estimating mental defect. Journal of American Medical Association, 1914, 62, 741-747.
- Kokaska, C. A tool for community adjustment. Mental Retardation, 1964, 2, 365-369.
- Kolstoe, O. P. & Frey, R. M. A high school work study program for mentally subnormal students. Carbondale, Illinois: Southern Illinois University Press, 1965.
- Krathwohl, D. R. Stating objectives appropriately for program for curriculum, and for instructional materials development. Journal of Teacher Education, 1965, 16, 83-92.
- Lawson, L. J. & Myklebust, H. Ophthalmological deficiencies in deaf children. Exceptional Children, 1970, 37, 17-20.
- Layman, E. Children who hear aid the hearing impaired. The Volta Review, 1974, January, 37-41.
- Lesseiger, L. Accountability: Its implications for the teacher. In D. W. Allen (Ed.), The teacher's handbook. Glenview, Illinois: Scott Foresman, 1971.
- Levine, E. Psychological tests and practices with the deaf: A survey of the state of the art. The Volta Review, 1974, 76, 298-313.
- Lindvall, C. M., Nardoza, S., & Felton, M. The importance of specific objectives in curriculum development. In C. M. Lindvall (Ed.), Defining educational objectives. Pittsburgh, Pa.: University of Pittsburgh Press, 1964.
- Lovitt, T. C. Assessment of children with learning disabilities. Exceptional Children, 1967, 34, 233-239.
- Lundstrom, P. Rubella during pregnancy: Its effects upon prenatal mortality, the incidence of congenital abnormalities, and immaturity: A preliminary report. Acta Paediatr, 1952, 41, 583-594.
- Martin, E. Memorandum to Directors of the National Regional Resource Center, March, 1973.
- McClurg, W. H. Dyslexia: Early identification and treatment in the schools. Journal of Learning Disabilities, 1970, 3, 372-377.

- Mearig, J. On becoming a child advocate in school psychology. Journal of School Psychology, 1974, 12, 121-129.
- Meehl, P. E. Clinical versus statistical prediction. Minneapolis: University of Minnesota Press, 1954.
- Michael W. B. & Metfessel, N. S. A paradigm for developing valid, measurable objectives in the evaluation of educational programs in colleges and universities. Educational and Psychological Measurement, 1967, 27, 373-383.
- Miller, H. C. Scope and incidence of congenital abnormalities. Pediatrics, 5, 320-324.
- Mira, M. Behavior modification applied to training young deaf children. Exceptional Children, 1972, 39, 225-229.
- Montagu, M. F. A. Constitutional and prenatal factors in infant and child health. In M. J. E. Linn (Ed.), Symposium on the healthy personality. New York: Josiah Macy, Jr. Foundation, 1950.
- Mussen, P. H., Conger, J. J., & Kagan, J. Child development and personality. New York: Harper & Row, 1963.
- Myklebust, H. The deaf child with other handicaps. American Ann. Deaf, 1958, 103, 487-509.
- National Advisory Committee. Annual Report of the National Advisory Committee on Handicapped Children (Special Education for Handicapped Children), January 31, 1968.
- Nunnally, J. Psychometric theory. New York: McGraw-Hill, 1967.
- Ohrman, W. F. One more instant solution coming up. Journal of Special Education, 1972, 6, 377-378.
- Pennsylvania Association for Retarded Children (PARC) vs. Commonwealth of Pennsylvania, Civil Action No. 71-42-(E.D. Pa. 1971).
- Pintner, R. & Patterson, D. G. A scale of performance tests. New York: Appleton-Century-Crofts, 1917.
- Pophan, W. J. Objectives and instruction. In Instructional objectives, American Education Research Association Monograph Series on Curriculum Evaluation, No. 3. Chicago: Rand McNally & Co., 1969.
- Porteus, S. D. The validity of the Porteus Maze. Journal of Educational Psychology, 1939, 30, 172-178.

- Provence, S. & Upton, R. C. Infants in institutions. New York: International University Press, 1912.
- Provus, N. M. Teaching for relevance: An inservice training program. Chicago: Whitehall, 1969.
- Reynolds, M. C. A strategy for research. Exceptional Children, 1963, 29, 213-219.
- Reynolds, M. C. A framework for considering some issues in special education. Exceptional Children, 1962, 28, 369-370.
- Rusalem, H. & Rusalem, H. Introduction: The assessment of blind persons. Proceeding of the Conference on New Approaches to the Evaluation of Blind Persons, June, 1970.
- Sabatino, D. A. & Ysseldyke, J. E. An evaluation of diagnostic-prescriptive teaching with handicapped children. Mimeograph from the Pennsylvania State University, University Park, Pa., 1972.
- Sabatino, D. A. & Boeck, D. G. A systems approach to provide educational services to children with learning disabilities. King of Prussia, Pa.: Buttonwood Farms, Inc., 1973.
- Sabatino, D. A., Ysseldyke, J. E., & Woolston, J. Diagnostic-prescriptive perceptual training with mentally retarded children. American Journal of Mental Deficiency, 1973, 78, 7-14.
- Sabatino, D. A. & Salter, D. Development 0-2. Commonwealth of Pennsylvania Department of Special Education, Harrisburg, Pa, 1974.
- Sabatino, D. A. & Dorfman, N. The interaction between two commerical reading programs and the primary perceptual modalities of EMR children. Exceptional Children, in press.
- Scheller, J. & Deignan, M. An approach to diagnosis and remediation of learning disabilities. Journal of Learning Disabilities, 1969, 2, 508-523.
- Scriven, M. The method of evaluation. In R. E. Stake (Ed.), Curriculum evaluation. American Educational Research Association Monograph Series on Evaluation, No. 1. Chicago: Rand McNally & Co., 1967.
- Sever, J. Limited persistence of virus in congenital rubella. American Journal of Diseases of Children, 1964, 110, 452-454.
- Sheridan, T. B. Final report of a prospective study of children whose mothers had rubella in early pregnancy. British Medical Journal, 1964, 2, 536-539.

- Spitz, R. A. & Wolf, K. M. Analitic depression; An inquiry into the genesis of psychiatric conditions in early childhood, II. In Freud et. al. (Eds.), The psychoanalytic study of the child, Vol. II. New York: New York International University Press, 1946.
- Stein, L. & Green, M. Problems in managing the young deaf-blind child. Exceptional Children, 1972, 38, 481-483.
- Strauss, A. A. & Lehtinen, L. E. Psychopathology and education of the brain-injured child. New York: Grune & Stratton, 1947.
- Stufflebeam, D. L. Evaluation as enlightenment for decision making. Address at a working conference on assessment theory, the Commission on Assessment of Educational Outcomes, the Association for Supervision and Curriculum Development, Sarasota, Florida, January 1968.
- Stufflebeam, D. The relevance of the CIPP evaluation model for educational accountability. Unpublished paper at the Ohio State Evaluation Center, 1972.
- Tillman, M. H. Intelligence scales for the blind: A review with implications for research. Journal of School Psychology, 1973, 11, 80-87.
- Tweedie, D. Behavior change in a deaf-blind multihandicapped child. The Volta Review, 1974, 76, 213-218.
- Vergason, G. A. Accountability in special education. Exceptional Children, 1973, 39, 367-373.
- Vernon, M. Rh factor and deafness: The problem, its psychological, physical, and educational manifestations. Exceptional Children, 1967, 34, 5-12.
- Vernon, M. Prematurity and deafness: The magnitude and nature of the problem among deaf children. Exceptional Children, 1967, 33, 289-298.
- Wepman, J. M. The perceptual basis for learning. In H. A. Robinson (Ed.), Meeting individual differences in reading. Chicago: University of Chicago Press, 1964.
- Werner, J. S. & Kaplan, B. Symbol formation. New York: Wiley & Sons, 1963.
- Werry, J. S. & Quay, H. C. Observing the classroom behavior of elementary school children. Exceptional Children, 1969, 35, 461-470.

- Younie, W. J. & Clark, G. M. Personnel training needs for cooperative secondary school programs for mentally retarded youth. Education and Training of the Mentally Retarded, 1969, 4, 184-196.
- Ysseldyke, J. E. Diagnostic-prescriptive teaching. The search for aptitude-treatment interactions. In L. Mann & D. Sabatino (Eds.), The first review of special education, Vol. I. Philadelphia: JSE Press, 1973.
- Zito, R. J. & Barda, J. I. Achievement motivation among negro adolescents in regular and special education programs. American Journal of Mental Deficiency, 1969, 74, 20-26.

SENSORY MOTOR TREATMENT
FOR SEVERE AND PROFOUNDLY RETARDED CHILDREN

BY

J. Dean Jones, Program Director

Utah State Training School
American Fork, Utah

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

284

BIOGRAPHICAL SKETCH

J. Dean Jones is the Program Director at the Utah State Training School in American Fork, Utah. He received his B.A. and M.A. in Speech Pathology and Special Education from Brigham Young University and is a Doctoral candidate at the University of Utah in Speech Pathology and Education Psychology.

Mr. Jones organized and directed the Special Education Department of a public school district in Utah for fifteen years before moving to the State Training School.

He is coauthor of the Utah Test of Language Development, Test of Listening Accuracy in Children, and the Screening Speech Articulation Test.

AUTHOR'S CONCERNS

Treatment, Sensory Motor

1. Do sensory motor, non-academic type programs for severely retarded and multiply handicapped children have a legitimate role in the public educational systems of our nation? Urban vs. Rural?
2. Does the "traditional" educational structure (a teacher with a specified number of students teaching a modified academic curriculum) provide an appropriately designed educational program for severely retarded and multiply handicapped children?
3. Are teacher-training programs relating adequately to the needs of the severely retarded, multiply handicapped children in our public schools and institutions? This would include most training programs in the professions of Speech Pathology, Audiology, Occupational Therapy, Physical Therapy, Recreational Therapy, Learning Disorder Specialist, Psychologists, Social Worker, etc.
4. Can Piaget-type sensory motor stages of cognitive operations be taught to severe and profoundly retarded children? Some have hypothesized that these skills are "discovered" by the child spontaneously through processes of maturation only.
5. Since ambulation and self-feeding skills rely on reflexes so heavily, can these skills be taught formally to the profoundly retarded young child or are they acquired through maturation and experience, and not through formal education?
6. Does sensory motor training result in greater or more efficient use of the profoundly retarded child's sensory and motor mechanisms? Some feel that it merely develops so-called "splinter skills" without generalizing to the sensory motor abilities of the child as a whole?
7. Does sensory motor training facilitate the development of language in the mentally retarded child?
8. Does increasing age present a poorer prognostication for improvement in self-help skills resulting from sensory motor training?

9. Does sensory motor training have application in the educational treatment of the hyperkinetic and hypokinetic child?
10. Does parent involvement in the sensory motor program increase the overall effectiveness of the treatment process?

207

SENSORY MOTOR TREATMENT FOR SEVERE AND PROFOUNDLY RETARDED CHILDREN

The rationale for this paper will be basically eclectic by nature, but certain aspects of it have been greatly influenced by the late Newell C. Kephart of the Glen Haven Achievement Center and Dr. Clara Lee Edgar, Project Director of the Hospital Improvement Program of the Pacific States Hospital who has contributed so much research and methodology of adapting sensory motor training to severely retarded children. Special recognition is also given to Dr. Merlin J. Mecham, Director of the Division of Speech Pathology at the University of Utah and Dr. Boyd Call of the Physical Therapy Division of Brigham Young University who contributed so much of their time and talent in further adapting therapy programs to serve the special needs of the profoundly retarded, multiply handicapped children.

In a telephone conversation, Dr. Kay Kramer informed me that the resource centers for the handicapped have been allocated monies called non-competitive funds to use for the profoundly handicapped children where there have been no available programs offered for them. It is to this group that I am going to direct my remarks.

I am sure that many special educators are familiar with the frustrations and disappointments involved in trying to provide adequate and meaningful services to this population of children.

Because of the complexity of their problems, many have found the only places they could receive services were special schools or institutions for the retarded, even when there was often evidence that they were not retarded, but had other disorders, such as aphasia, visual and hearing problems, cerebral palsy, emotional disorders, etc. It would be comforting to think that these children are no longer being neglected, but we all know that this is far from reality.

As the Director of Special Education for fifteen years in a public school system in Utah, I attempted to provide services for some of these "exceptional children" in the schools. While I look back with great satisfaction on the successful experiences with some of the children, I can still recall the frustration of not being able to adequately provide for so many of the other children.

As I visit special education classes in schools and facilities throughout the nation, I find many dedicated teachers and therapists working together and providing excellent services, but all too often, I have seen just as dedicated people attempting to serve severe and profoundly handicapped children without adequate facilities, equipment, training, supportive services, such as medical, psychological, social services, occupational therapy, physical therapy, speech therapy, etc. It soon becomes very evident that the education of these children is not the responsibility of any one group or profession, but need the combined efforts of many if the severely handicapped are to receive an adequate program.

It is also evident to me, as a Director of Programs for these types of children, that the more severe the child's handicapping condition is, the harder it seems to be to find services which are adequate to meet his needs.

Last year I attended a meeting in a neighboring state where a group of parents and professionals were discussing how to stimulate diagnostic and educational services for severe multiply handicapped children. One mother related her experiences of going from place to place trying to find medical treatment for the child. A physician in the group, after hearing the mother's experiences, expressed how frustrating it is to him to try to treat one of these children because their problems are so complex, and how tempting it is to just refer the child somewhere else. Some school administrators openly express their reluctance to become involved in setting up programs for the severely handicapped because of the expense, as well as the difficulty in finding trained personnel to treat them. Other administrators question whether it is the school's role to treat "non-educable children" and prefer to refer them to some institution. As a consequence, many are denied the experience of a "normal" home life as an adjunct to their special schooling.

It has been my experience that most parents are willing to work with their child to carry over his training objectives if he is in a good program.

In an address in Salt Lake City, Dr. Francis Lynch (1974) reported that according to Senator Harrison Williams' report, one million handicapped children are excluded entirely from public school systems in the United States. I believe that it is imperative that educators, legislators, and others be helped to accept their responsibilities to these children who have been excluded from programs.

The importance of providing early diagnosis and training for the handicapped children is well-known, and the first two years are a most vital period. Parents of the child should be included in the team of educators, and are able to provide some valuable input in setting up proper objectives.

Anyone who has ever visited a hospital ward for severely handicapped children, particularly the cerebral palsied, probably have seen children who have been grotesquely deformed by their conditions. While in many cases, perhaps nothing could have been done to prevent such deformities, there are many cases where it has been possible to prevent the deformities from occurring. As Pearson has pointed out, "These children are not born with deformities; rather they have deformity-producing tendencies resulting from the abnormal patterns of posture and movement. As growth takes place, these tendencies are likely to be fulfilled unless preventable and ameliorating therapy is provided" (Pearson, 1972, p. 10). Bobath, too, emphasized that "equally important in the child with severe motor delay or with cerebral palsy is the need to prevent the establishment of abnormal movement patterns by means of treatment techniques which will facilitate development of potential ability in a more normal way" (Bobath, 1967, p. 373). All too often, valuable treatment time is lost when treatment is not started until the appearance of deformity signals the unquestioned need for referral to the appropriate specialist. It is possible that the parent might play a vital role in the first two or three years, if she has guidance in how to stimulate and handle her child.

The physically handicapped child suffers additional frustration in his intellectual and emotional development because he cannot explore his environment and receive the sensory motor stimulation necessary to his optimal growth and development. "The child with deformed trunk and limbs does not gain an upright position against gravity; neither does he out-grow primitive postural reflexes. Therefore, the profoundly retarded child who is unable to move remains on the sensory motor level of a normal child aged 0-4 to 2-0" (Cratty, 1972, p. 198).

The need for intensive programming based on the specific needs of these children is evident from a study conducted at the Pacific States Hospital. A study of 727 patients admitted to the hospital over a two-year period and re-examined annually for three years revealed that only a few resident patients, approximately six percent, were likely to become fully ambulatory or toilet trained if admitted in a non-ambulatory or non-toilet trained condition (Eyman, et. al., 1969). Some patients regressed from being partially ambulatory or toilet trained to a non-trained condition. In Eyman's study, only four percent of children under six years of age with I.Q. 30 or higher became fully toilet trained. The exception was a group of 15 patients from the Hospital Improvement Program, 1965-1968 and a group of 29 patients from a sensory motor training program who made more improvement than the total group of 727.

It is encouraging to see the increased emphasis being placed on early childhood education, especially for the handicapped, and to note that the objectives of the Bureau of Education for the Handicapped includes, (1) enrollment of 85% of the pre-school aged handicapped children in Federal, State, and Local education programs by 1978 and (2) assurance that every handicapped child is receiving an appropriately designed

education by 1980. From my observation and experience, the assurance that every handicapped child will receive an appropriately designed education will offer our educational system one of it's greatest challenges. Far too many special education programs for severely retarded and multiply handicapped children are still trying to modify the regular school curriculum where academic subjects receive a major emphasis, because the children have been placed in a school environmnet with too few special pieces of equipment and have been taught by teachers who have been mainly trained in "modified academics."

As Kolburn (1965) has so aptly stated, "The special education course for teachers base their methods on the comprehension of the retarded child. These methods seem to be the same or similar to those used in educating the normal child. In the process the curriculum is watered down and the rate may be slowed down, but it still does not seem to be the answer. We give them more drills. We explain more. We try to use simpler language. We try to adjust experiential and project methods, and we think we are teaching objectively, but what may be objective to us may be abstract to them."

When I have asked some school administrators why the special education classes are still utilizing an inappropriate curriculum, they have offered as one of their main reasons, "It's what the parents expect from the school." How many retarded children are still sitting through 12 years of school trying to learn to read, write, and do arithmetic, but are still unable to use basic tools, cook a simple meal, and in some cases, I have personally observed, not even know how to open a can of soup, launder an article of clothing, or perform many other self-help skills.

While it is recognized that a certain amount of academic achievement is possible and should be developed with this population of children, there are other approaches to treatment, such as sensory motor training and specialized therapy that should be given more serious consideration in designing an appropriate educational program.

Another of the objectives of the B.E.H. is to assure that all the handicapped children served in schools have trained personnel competent in skills required to aid each child to reach his full potential.

This will, in my opinion, be nearly impossible until we see more physical therapists, occupational therapists, speech therapists, special educators, and others, who are especially trained to work as a team with these severely handicapped children.

I question whether our college training programs, even in these specialized professions, are giving enough importance to the real needs of this group of children. When I have questioned the directors of some of the college teacher training programs concerning the needs of these

children, some have admitted that they are training their people to work in public schools with the less severely involved children because there are more of them, while at the same time, they admit they should be more involved with the severely handicapped child. I am certainly not unaware of the limits imposed upon training programs as to the degree of specialization which is possible because of lack of adequate funds. However, I feel that more of the 'practice teaching' or 'clinical field work' could be done in programs with the profoundly retarded than is now the case. My own experience as a speech pathologist and special educator is that I was not prepared to handle the complexity of the problems presented by the multiply handicapped child, and most of the Specialists, Occupational Therapists, Physical Therapists, Speech Therapists, Special Educators, Psychologists, Social Workers, etc., that I have employed in the past 10 years have had to "retrain" themselves in order to become effective in their work.

The effectiveness of sensory motor training for the severely retarded has been the subject of discussion among educators, therapists, physicians, and parents for many years. There has been a tendency for increased emphasis in that area because of the apparent effectiveness of sensory motor training. Cratty, reporting on sensory motor programs for profoundly retarded states, "The rather comprehensive programs to which these children are being exposed seem generally to be eliciting the desired changes. I have witnessed marked improvement in children who formerly exhibited only rather vegetative responses and observed they could walk to the dining room, feed themselves, were beginning to exhibit language understandings, rudimentary speech, and even were able to sight read several words including their own names and those of their classmates" (Cratty, 1972, p. 116).

In the past 15 years as Maloney, et. al. (1970) have pointed out, there has been an increased interest shown in these sensory motor, perceptual motor systems of mediating children with learning disorders (Barsh, 1965; Delecatto, 1959, 1963; Frostig and Horne, 1964; Gettman, Kane, Halgren, and McKee, 1966; Kephart, 1960). At the same time, there have also been some who have been skeptical and have urged educators to use constraint and caution until well-controlled research studies have been done (Bateman, 1967; Cratty, 1967; Robbins, 1967).

Recent research has demonstrated that sensory motor training does promote generalized body-image development (Ball and Edgar, 1967; Maloney, Ball, and Edgar, 1970), and another study indicated that organically impaired severely mentally retarded who received intensive sensory motor training gained significantly more than control children in adaptive behavior (Edgar, Ball, McIntyre, and Shotwell, 1969).

Studies by Held (1965, Held and Bossum (1961), Held and Freedman (1963), Held and Hein (1963), Mikaelian and Held (1964), reviewed by Maloney, Ball, and Edgar (1970) have indicated a strong relationship between sensory motor integration and perceptual and cognitive development.

Since other papers are being presented on the Diagnosis of Sensory Motor skills, I will confine my paper to the treatment aspects of sensory motor training, and, as stated earlier in my paper, I will concentrate on the techniques we have found useful in working with the severely and profoundly handicapped population at the Utah State Training School. I have seen many children in other community programs and special education classes of the public schools that could also benefit from similar programs if they were available, and I hope my presentation will help to stimulate incentives for development of more of these types of programs for these children.

Several models on language impairment have been meaningful to me, since my early training was a speech pathologist, and I believe such models also help illustrate the sensory motor concept of learning. One outstanding model was presented in an article on language impairment (Wepman, Jones, Bock, and Van Pelt, 1960), and I shall take the liberty of borrowing and modifying the concepts from the article which seem to fit the purposes of this paper, but which may not necessarily represent the original concept of the authors.

The operational diagram of language functions of man, Figure 1, presents the concept of the triad of function within the central nervous system: Input transmission leading to integration leading to output transmission - input and output being modality-bound.

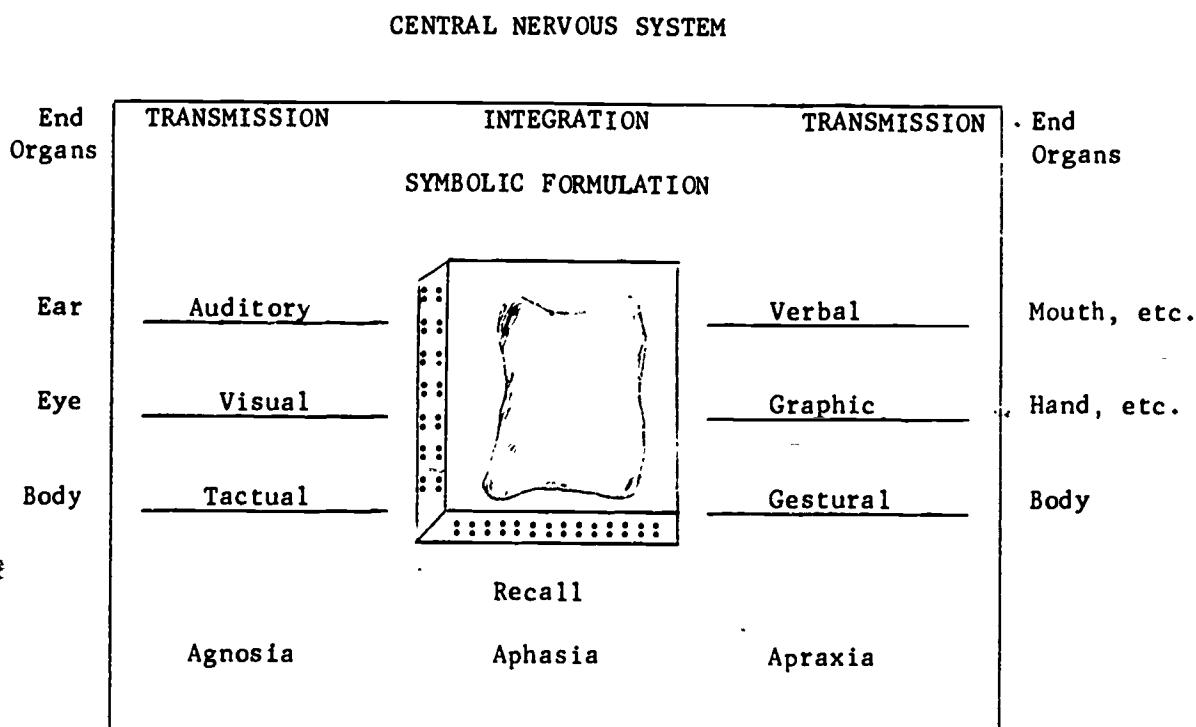


Figure 1

While this diagram presents a rather concise concept of language, it fails to show the role of lower levels of function in language and learning and the effects of feedback, both external and internal, which I feel are all important foundations resulting from sensory motor training.

The following diagram, Figure 2, takes into account memory, external feedback, and the modalities of transmission.

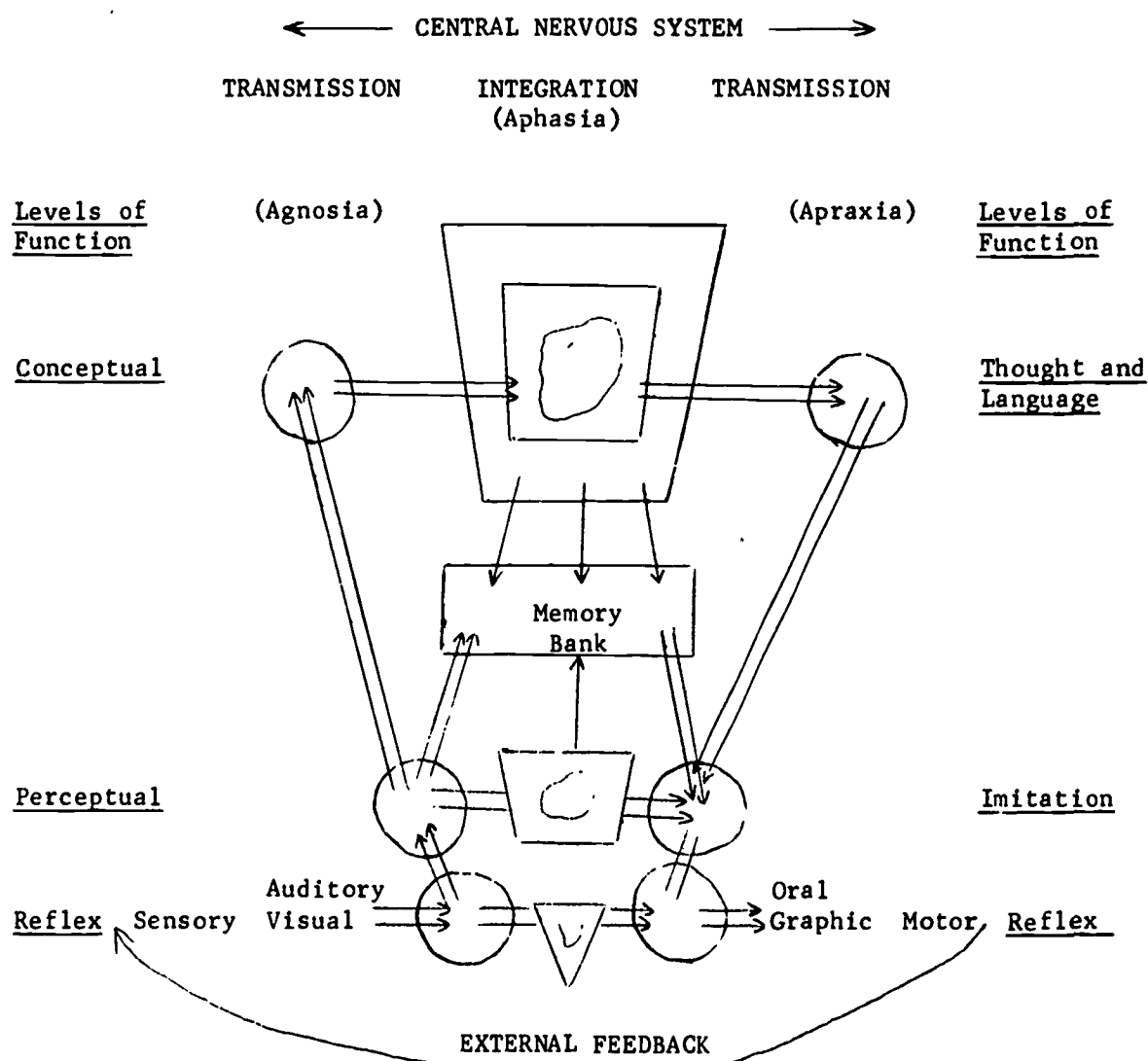


Figure 2

The three levels postulated by Wepman are the reflexive, the perceptual, and the conceptual. "If a stimulus is directed across the lower

line, reflexive behavior ensues. No relationship is pictured here between behavior and recall, since reflexive behavior is thought to leave no apparent trace within the system. A degree of central nervous system control is indicated in the central position of the reflex level where reception is translated into motor acts. An example of this level of function in language is the so-called "shadow speech" imitation process. If the child 'shadows' rapidly enough to keep up with normal speech rate, he will be unable to remember anything which he has repeated. There is also considerable central nervous system control in facilitation or inhibition of specific attentional or orientation reflexes. The early motor movements are reflexive and generalized and must be refined and differentiated. In my slide presentation I will demonstrate how improper facilitation or inhibition of reflexive behaviors interfere with the child's ability to develop self-help skills and independence.

I will also demonstrate some techniques that would be helpful for parents, teachers and others involved in the education and training of children with abnormal reflexive behaviors.

"When the stimulus is shunted to the next higher level, the perceptual level, the transmission across the system is seen as the capacity to transmit percepts which leave their trace on the memory bank, but have no meaning to the individual" (Wepman, et. al. p. 327). An example of this in language is rote memorization of numbers by a child who can count to 20, but can't tell you how old he is. This level of operation allows the individual to repeat words or copy what he sees without understanding the stimulus. This level roughly compares with sensory motor period of development of Piaget. It is during this time that the child expands his contact with the environment and learns to move and explore and organizes basic, though non-conceptualized, information concerning objects, including himself and others; concerning space, sequence of events, and causality. In order to utilize these experiences, the child must develop a perceptual motor match, figure-ground relationship, so that information received through the perceptual system is correlated with the motor system. Kephart (1971, p. 112) believes that the time when the pattern in the motor area of the cortex is sent down to muscle and results in movement is the time when consciousness first occurs in the perceptual process. "We are first conscious of the stimulus when the output pattern has been generated." During this stage of development, the child continues to develop the skills of posture and balance, locomotor training, contact and manipulation of objects which increase his visual motor data, receipt and propulsion skills of throwing, catching, moving in space, body image, etc.

The highest level of function is the conceptual level where the incoming stimulus affects both the memory bank and the integrative process, and where meaning is given to the stimulus through associations of past experiences. In language development, this is the level at which the child learns an expanding vocabulary and the various rules for generating expression of thought.

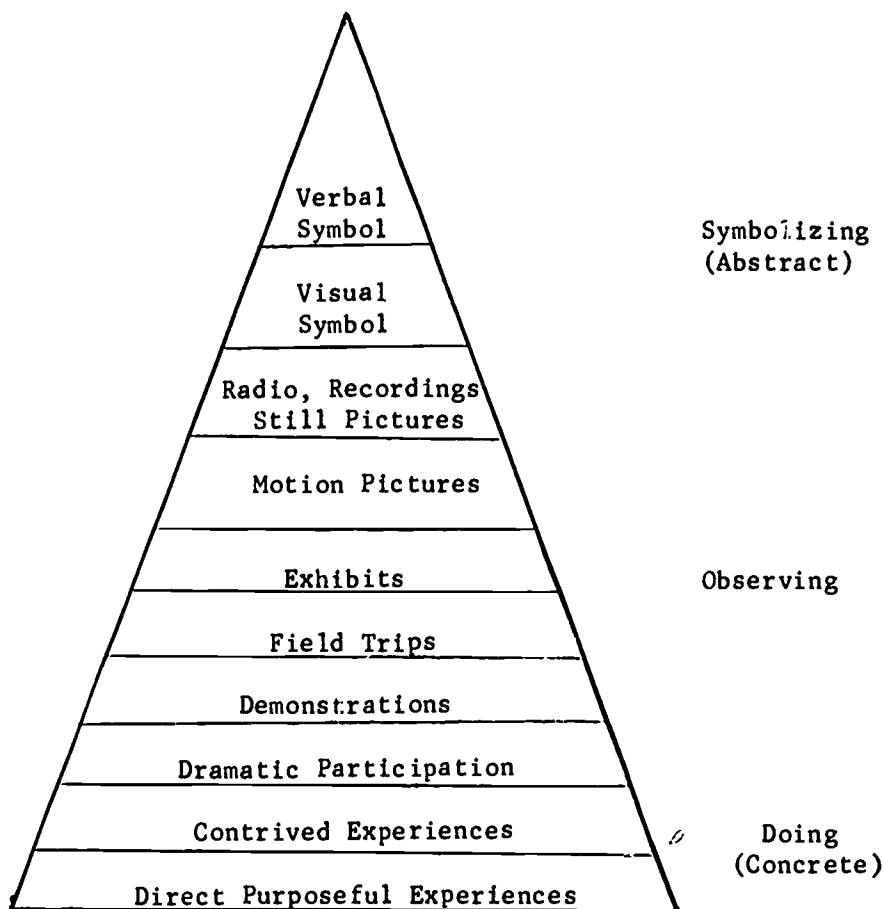
The development of the feedback mechanism, both internal and external, is essential in the sensory motor program, since it provides the kinesthetic feedback essential in the differentiation of muscle movement, as well as the visual-motor information needed to learn to relate with the environment.

In the visual aid portion of my presentation, this concept will be further elaborated and related to the treatment techniques.

The development of the motor movements follows a pattern of development, and they are somewhat related, in my mind, to the Wepman model presented earlier in the paper. According to Kephart (1971, p. 7), differentiation learning takes place according to two general developmental directions beginning with the head and tail progression (cephalo-caudal) and from the inside to the outside of the body (proximo-distal).

In planning treatment programs for multiply handicapped children, just as the reflex must be considered, so, also, must the head be controlled before the teaching of other skills are attempted.

There is one other model which I have also found useful in trying to design an appropriate curriculum for not only handicapped children, but for all people, including the university students I have instructed over the past 14 years.



"Cone of Experience"

Figure 3

The concepts in the Cone of Experience presented by Dale (1946, p. 24) reinforce the need to involve the handicapped child in direct purposeful experiences, which, I believe, is the same as sensory motor training. Dale says that experiences are made useable "by giving them names, by crystallizing them into generalizations, rules, principles, concepts, habits, sayings, and the like" (Dale, 1946, p. 24).

In applying these principles to ourselves, the childhood memories we most vividly recall are those evoked by our past experiences because they involved doing, not just thinking or talking about an experience.

As teaching methods move upward on the cone of experience, the more symbolic and abstract they become. They are just the opposite from the way they should be, and are taught to infants in the normal home environment. For instance, as a mother bends down to pick up the child, she usually talks to the child and labels the experience such as "Up we go." "Into the tub." "Here is your bottle." "Oh! You are messy." "Let's turn you over," etc. The child is learning directions, words, body image, security, and many other concepts from these experiences. He is learning the labels for the experiences which will help him generalize later abstractions. Teaching methods which do not utilize active child involvement; where abstract symbols are given out by the teacher to be repeated back by the student are, in my opinion, a waste of valuable time, as well as a waste of human potential.

It is recognized that some psycholinguists believe that language, like Piaget's mental operations, are not teachable through direct formal curriculum.

I know of no formal research studies which have demonstrated that language can be taught formally. Dr. Merlin Mechem, however, has conducted some preliminary studies in one of our cottage programs that has shown some mixed results.

He found that children with some language that have a fairly strong auditory channel have shown charted progress from direct intervention, while those with poor auditory channel function have shown little progress in spoken communication. Children who were non-verbal tested much higher on the manual expression sub-test of the I.T.P.A. than they did on the auditory sequential sub-test, which suggests that they were stronger visually than auditorily. Mechem is now exploring the use of a visual language program for these children, using visual pictograph-type symbols and gestural and manual language. The preliminary results have been encouraging.

Techniques of sensory motor training

Since many profoundly mentally retarded children are as Bradtke (1972) describes, "(1) unaware of self, others and environment, (2) fearful of

movement and physical contact, (3) unresponsive to and/or unable to cope with visual, tactile, and auditory stimuli," it is necessary to create an awareness of his body parts by engaging in activities, such as brushing his body parts with objects varying textures, such as a towel, ice, tapping, providing kinesthetic feedback through resistance, cuddling, splints, sand bags, weights, sounds, smells, tastes, etc.

Special efforts must be directed to help develop the child's ability to attend to a task until it is completed.

Sometimes the child has difficulty in developing attention because he has been unable to develop a figure-ground relationship (Kephart, 1971, p. 24) auditory, visually, or kinesthetically. In order to attend the pertinent aspects of the environment must become "figure", while the remaining aspects fade into ground, but are not lost to consciousness. To illustrate this problem, consider the special problems of the hyperkinetic child whose level of muscle tension is so intense that he finds it difficult to differentiate between the muscles that are suppose to be figure from the ones that are ground. It will be necessary to teach this type of a child to relax so that the appropriate muscles tension can be established and identified.

The opposite is true with the hypokinetic child whose overall muscle tone is too low or flacid. In order to develop figure-ground relationships, it will be necessary to use weights, provide resistance to movements, etc., so that the appropriate tension may be identified. Kephart further emphasized that the problems of figure-ground relationships are deserving of a great deal more attention than they have received to date (Kephart, 1971, p. 27).

Splintering

Sometimes the normal progression in the differentiation process is interferred with, and a child learns an isolated skill not related to the more generalized learning which has taken place earlier. This learning is referred to as a "splinter skill" which permits him to satisfy an outside pressure or demand, such as learning to write by memorizing the movements his fingers were making.

Very little variation of the task is possible because the child has only learned some specific movements to accomplish a specific end. The same splintering skill is noted when a child can learn to walk a balance beam without stepping off, but is unable to balance on another balancing task because he really hasn't learned to balance, but has learned to walk a balance beam (Kephart, 1971, p. 61-62).

Feeding

In cases where the motor pattern of the asymmetrical tonic neck reflex or of total hyperextension of the body makes isolated movements of the arms, head, jaw, tongue, and lips difficult, it will be helpful to position the child so that this reflex is inhibited. This can be accomplished by placing the child so that the head is in slight flexion, legs are apart, hips bent at right angle, and arms forward. In this way feeding may be facilitated. It is important in the older child to see that his chair-fit is proper so that his feet are supported in order to avoid this hyperextension.

Chewing, sucking, and swallowing are also important to the development of speech and should be of concern to the speech therapists, as well as others working with the child (Mecham, M. J., p. 83).

Mecham also believes that the child should be taught to discriminate drooling, and should be made swallow-conscious and keep the saliva pushed to the back of the mouth to be swallowed (Mecham, p. 85). Icing the upper lips and sides of the mouth and tongue has proven beneficial to stimulate swallowing and prevent drooling.

In the film presentation, I will show some special techniques and equipment used to facilitate the self-feeding skill development.

Self-support and mobility

Wilson and Parks (1970) have outlined the progression of skills a child has to achieve in order to ambulate, and they include head support, rolling over, trunk support, sitting, creeping, crawling, pulling to an upright position, walking with support and around objects, and independent ambulation.

Each one of these skills require a great deal of sensory motor integration, including directionality, concept of up and down, body image, and its relationship to space, balance for standing and walking, development of muscle strength, perception of sensual stimuli, and being able to respond appropriately. In addition, the child must have the motivation to progress and the feelings of security and trust of those associated with him.

The severely retarded child may be deficient in any or all of these and will need a well-organized training program if he is to achieve his goal.

Wilson and Park (1970) and Edgar (1971) describe some of the equipment and activities found to help these children achieve ambulation. These were developed at Pacific State Hospital. The film presentation will show some of this material being used.

A large inflatable plastic ball 30" to 36" can be used to promote relaxation, postural adjustment and development of spatial relationships. As the child is rolled over with his feet securely held, he is encouraged to reach out and touch the floor (a protective movement). Additional concepts can be taught, such as beginning and ending of a task, feeling of trust and security, etc.

Teaching the child to roll along a carpet strip and other textured surfaces promotes motor coordination control of head, trunk, and limbs, directionality, body image, kinesthetic feedback, vestibular balance, beginning and end of task (sequential awareness) and, when combined with auditory stimulus, teaches listening skills. The child may need assistance to begin this activity, but should be encouraged to gradually assume the responsibility for carrying out the act.

"Belly boards" (a small board 18" x 20" with castors) provide experienced in movement and balance for the non-ambulatory child. Use of this device builds neck and trunk muscles and develops head control and forces the child to cope with gravity. It also develops pushing and pulling movements of arms and legs and assists the child in learning to crawl. The child is first tied on the board in a prone position with his shoulder and arms extended beyond the front to promote free movement and force him to support his torso and use his arms and hands. Once the movement is learned, the child can move along a prescribed route with a beginning and end, transport articles which increases his ability to attend to a task (pick up, transport, and release). As the child improves in his balance skills, he can move to a supine position, and then a sitting position on the board.

Fast movement when pushed or pulled through space, causes him to fixate on the environment, perceptually, while he is in motion. Sensations from the inner ear, visual and kinesthetic modalities are integrated.

Crawling

Crawling is taught by use of deep kinesthetic stimulation to inner thighs and upper inner arms to help children initiate movement in appropriate limbs to produce alternating movement of arms and legs while his stomach is flat on the floor or on a belly board. By having the child crawl through an obstacle course of chairs, tables, tunnels, he is encouraged to utilize motor planning and problem solving. Sometimes an amphibian reaction can be elicited by lifting the pelvis on one side which causes flexion in the ipsilateral arm, hip, and knee which can then be useful in crawling.

Equilibrium and balance

Bicycling as soon as a child can support himself in a sitting position, whether he can walk or not, is a good activity. His feet can be fastened to the pedals and the tricycle can be pulled about. This gives an alternating pattern necessary for walking, and also serves to loosen tension in the knees.

Mattresses are used for many activities for a variety of reason, such as developing sitting, balance, trunk balance on knees, standing balance and walking balance. By using a carpet strip on each end for him to step on defines a sequential task. Edgar, (1971) describes what takes place when a semi-ambulatory child is placed standing in his bare feet at one end of a mattress. He immediately gets more information about himself through touch and pressure of his bare feet on the non-stable mattress, and through the joints and muscles of his legs. He is placed in a state of alertness by the unstable mattress and must immediately accomodate to changes caused by his own instability as he tried to stand upright. He must differentiate sensations in one leg from the totality of his sensory experience if he is to move that leg forward in order to take a step. As the teacher insists on his remaining upright and coping with the situation, he may be far more aware of her than he had as a passive child who has been fed, bathed, and carried about.

He may gain primitive awareness of his own separateness from her through having to cope with the situation. He also gains an awareness of distance as he walks across the mattress many times (Edgar, 1971, p. 4). By having him walk forward and backward, he will become aware of the space behind him.

Variation of complexity may be added to the balance task by placing a block under one end of the mattress and having the child walk up the incline.

Stiff-legged children can be enticed to bend their knees and under-developed muscles can gain strength by mattress walking.

Rocking the child back forth gently helps the child develop differentiation in his legs and aids in walking. Placing weights on the legs also aids in the kinesthetic awareness of the position in space of the child's limb.

Rocking Horses on springs promote balance and use of body for movement. It forces the child to make necessary accomodations in order to maintain balance as it moves in all directions.

Rocking Boat (vistibular board) requires sitting balance and, when used with two or more children, promotes social interaction. When it is turned over it becomes stairs.

Stairs with a hand rail are used to force the child to become aware of his feet and body position in space. They can also teach reciprocal interaction of the arms and legs.

A ladder placed flat on the floor is used to train the child in a motor planning task and a perceptual motor task. By having the child step between the rungs, he is forced to watch and move his leg only so far or high. The task can be made more challenging by raising one side. The child can also walk on the rungs or on the sides for variety.

Boxes with a variety of materials such as flour, sand, beans, etc., can be arranged so the child can step in one box with one foot and the next box with the opposite foot. This aids in differentiation of sides and becomes a balance problem, perceptual motor problem, and motor planning problem.

T Stools - provides a balance problem; any slight movement of the child forces him to make appropriate compensating movements to maintain position against gravity. When used in a group with each child, stools placed on a carpet square help define his space, and the carpet prevents slipping of the stool. After this stool-sitting skill has been developed the children can be engaged in games and activities to add variety and practice.

Walking boards beginning with size 2' x 8" raised from the ground a few inches are used to develop balance, attention, and awareness of the task. By having the child attend to the slow, careful placement of his feet as he negotiates the board, the child is helped in the development of sequential time-space relationships.

Angels in the snow, (Edgar's modification). The integration of sensory and motor impressions from both sides of the body is best treated in the severely retarded young child by a modification of the method of "angels in the snow." The child is placed upon his back upon the mattress. His legs may need to be lightly restrained by one adult while another moves his arms slowly until they come together over his head. They are held and the hand tickled, or patted, after which they are moved slowly back to the child's sides. The adult holds the arms firmly to the mattress while sliding them along. While the hands are over the child's head, they may be brought forward together so the child can look at them. He may also touch his own head or feet for the adult's hand which he encounters as his hand comes together above his head. After helping the child with this performance, he is encouraged to do it by himself. The exercise is also done using the legs, except the child's head may be raised to look at the legs inward and outward movements. The child may need additional cues such as touching, nudging, etc. This may be necessary until he learns to differentiate the movement.

Roller Skating

Skating has been found beneficial in increasing the child's ability to attend to the task of keeping his balance. The weight of the skates provide kinesthetic feedback which helps in the body image and muscle differentiation. Sometimes it is necessary to use plastic skates on a carpet surface until the child gains enough confidence and skill to move to a hard surface and increase the speed and complexity of the task.

The list of activities found useful for training profoundly retarded multiply handicapped children is nearly inexhaustible. Toys and objects from nearly any store can be adapted and used successfully if the teacher, therapist, or parent understands the principles of training and can define the goals to be achieved for the child.

Some of the techniques will require specialized training if they are to be carried out properly because of their complexity (e.g., using reflexive behaviors to teach ambulation skills).

Other techniques, such as proper positioning for feeding, sitting, laying, etc., should be used by every person who works with the child, and especially, the parents who have to care for the child so many hours per day. The mother can "treat" the child as she carries him, bathes and dresses him, feeds and plays with him. She can even help the child when she is not even touching him through proper positioning and prevent deformity-producing postures.

Conclusions

In this paper I have attempted to present ten issues. I would now like to summarize these issues along with implications, and give some brief recommendations.

1. Do sensory motor, non-academic type programs have a legitimate role in the public educational systems of our nation? Urban vs. Rural?

I believe my bias is rather evident in my paper. Not only do I believe they have a legitimate role, but I believe in the programs for severely and profoundly retarded children, they have a major role. I further believe that these same children have a right to a public school education, and that the schools have an obligation to provide a program for every child.

If the only "potential" a child has is to learn to swallow rather than be tube fed all of his life, that may be just as legitimate use of education funds as to train another child to be a teacher, scientist,

Education is more than reading, writing, and arithmetic.

It must also be recognized that some smaller school systems do not have the capability of providing a team of specialists to adequately serve children in their schools. In those cases regional centers may be purchased from larger systems.

2. Does "the traditional" educational structure (a teacher with a specified number of students teaching a modified academic curriculum) provide an appropriately designed educational program for severely retarded and multiply handicapped children?

I believe that the severely retarded, multiply handicapped children are not able to receive an adequate education in the traditional academic environment. They require a different type of educational experience including basic sensory motor training and meaningful experiences based on their specific needs. The child's needs may be better served in a clinical environment where occupational therapists, physical therapists, speech therapists, teachers, etc. may all be involved in a team approach to the child's needs. The special schools and clinics still offer many advantages over the so-called normal school environment for these children.

I further believe that the reason schools continue to utilize an inadequate curriculum "because that is what the parents expect from the school" is evading the real issues. I suspect educators project the blame on the parents because they don't know what else to do with these children, or they are afraid to try something different which may be thought, by some, to be unrelated to education.

3. Are teacher-training programs relating adequately to the needs of the severely retarded, multiply handicapped children in our public schools and institutions? This would include most training programs in the professions of Speech Pathology, Audiology, Occupational Therapy, Physical Therapy, Recreational Therapy, Learning Disorder Specialist, Psychologists, Social Workers, etc.

In my paper I have alluded to the fact that I do not believe the university programs are adequately preparing people to serve these children. While it may be true that basic principles of therapy should be adaptable to the lower level of functioning, it has been my experience that a great deal of valuable time is wasted in retraining people who have graduated in specialized fields of training.

I believe that some of the university personnel need to become involved with these children and should become more aware of their real needs.

It has been my experience that it is much easier to get a teacher or therapist to relate to the child on a higher level of functioning. It is also my conviction that students in training need the actual experience of working with severely handicapped children in order to know some of the specialized problems.

4. Can Piaget-type sensory motor stages of cognitive operations be taught to severe and profoundly retarded children? Some have hypothesized that these skills are 'discovered' by the child spontaneously through the process of maturation only.

This past year we have conducted some preliminary studies utilizing the list of tactics (see appendix) in which some tasks are formally taught, while others are observed to see if they occur. These tactics were taken from McV.-Hunt, modified slightly and are grouped under the five major mental categories: (1) Visual pursuit and object permanence, (2) Development of means as separate from end results, (3) Gestural and vocal imitations, (4) Awareness of causality, (5) Construction with objects and, (6) Appropriate use of play objects or tools.

Our early exploration during the past year with the above named Piaget objectives has been "cautiously" encouraging. Research data are needed and will be forthcoming within the next year.

I would recommend that special education programs for severe and profoundly retarded children incorporate these tactics in the core of their curriculum.

5. Since ambulation and self-feeding skills rely on reflexes so heavily, can these skills be taught formally to the profoundly retarded young child, or are they acquired through maturation and experience, and not through formal education?

The clinical evidence is rather convincing that they can be taught formally. From the film presentation it has been demonstrated that some children who had been lying in a crib for 7 to 10 years had learned to walk and self-feed within 6 months.

It has also been demonstrated that the reflexive behavior of these children can be utilized in a formalized teaching situation to teach these skills.

It is recommended that the specialized clinical training methods developed for training the neurologically impaired be made more available to the teachers to the mentally retarded.

6. Does sensory motor training result in greater or more efficient use of the profoundly retarded child's sensory and motor mechanisms? Some feel that it merely develops so-called "splinter skills" without generalizing to the sensory motor abilities of the child as a whole.

It has been demonstrated by Kephart that a child may develop "splinter skills" if the person conducting the sensory motor program does not anticipate that possibility and plan for it accordingly. Research by Edgar and others has demonstrated that sensory motor training results in an

improvement in generalized body image development, adaptive behavior, perceptual and cognitive development. The film presentation has also shown how the sensory motor abilities has been generalized to other activities.

It is recommended that sensory motor programs take into account the possibilities of developing "splinter skills" and utilize methods to avoid them.

7. Does sensory motor training facilitate the development of language in the mentally retarded child?

From the film presentation it has been demonstrated that the potential for language stimulation is very great when combined with the sensory motor training.

It is my recommendation that the entire educational program should be centered on language development rather than attempting to teach language in any type of formalized situation. One use of language-centered stimuli with the very profound children is illustrated in appendix B. We have found that once the children understand even the most simple verbal instructions, they are much more relaxed, less fearful, and much more easily managed.

8. Does increasing age present a poorer prognostication for improvement in self-help skills resulting from sensory motor training?

There can be no doubt that increasing age presents a less optimistic prognostication for a handicapped child. However, from the films you have seen handicapped residents over twenty years old making progress in self-help skills.

It is my recommendation that more time and efforts be expended on this group of citizens who have not received adequate programs in their early years, and not assume that it is too late to do anything for them.

I believe that we should give each child the benefit of the doubt and give him every chance to demonstrate whether or not he can learn, given optimal opportunity and encouragement; we have found this approach to be much more practical and humane than merely placing all our trust in 'predictive tests' which are, for the most part, inadequate predictors for the profoundly handicapped.

9. Does sensory motor training have application in the educational treatment of hyperkinetic and hypokinetic children?

The special challenges these children present a teacher in the school is well-known to every person who has to deal with them. The techniques suggested by Kephart as alluded to in the body of this paper seem to me

2 (11)

to offer a partial answer as to where to begin treatment. If a child cannot attend to a task long enough because of poor coordination and body image, he will undoubtedly have difficulty attending to any task.

In the films some of the techniques have been demonstrated that have been successful in working with these children which should be incorporated in the educational programs of handicapped children.

10. Does parent involvement in the sensory motor program increase the overall effectiveness of the treatment process?

It is my belief that the parent should be a member of the team diagnosing and treating any child. Too often parents complain that nobody asks them what they think or what they recommend for their child. When one considers how many hours a day the parent is involved with the child, it should be obvious that they should be included in this team.

Provisions should be made for providing instruction and guidance for the parents in what types of behaviors are significant to report and how the parents can develop skills to better serve their child. It is also important that the goals of the parent coincide with and reinforce the goals of the educational program.

In conclusion I should like to state that while I believe methods and techniques are important, they are only as effective as the person who utilizes them.

A teacher or clinician who really cares for the children he teaches will never be satisfied with less than the most effective teaching methods he can find. The administrator who really cares will never be satisfied with less than the most effective teacher he can employ, and after employing that teacher, he must be willing to support, provide guidance and encouragement.

One teacher told me one day, "Mr. Jones, progress with these children is so slow and discouraging. If we don't have your support and know that you really care, it is nearly impossible for us to survive in this situation."

There are many children who cannot speak for themselves who are waiting for some legislator, administrator, teacher, therapist, and other influential person who cares enough, who has the courage to take up the challenge to establish a program for them that will help them achieve to their fullest potential.

In the words of Dr. Albert Schweitzer, "As long as there is a man lonely and in need anywhere in the world, he is my responsibility."

REFERENCES

- Ball, T. S. and Edgar, C. L. The Effectiveness of Sensory Motor Training on Promoting Generalized Body Image. Journal of Special Education, 1967, 1, 387-395.
- Barsch, R. A. Achieving Perceptual Motor Efficiency: A Space-Oriented Approach to Learning. Seattle, Washington. Special Child Publications, 1967.
- Bateman, B. Learning Disabilities - Yesterday, Today, and Tomorrow. Exceptional Children, 1965. 31 (4).
- Bobath, B. The Very Early Treatment of Cerebral Palsy. In Pearson, P. H., and Williams, C. E. Physical Therapy Service in the Developmental Disability. Springfield, Illinois: Chas. C. Thomas, 1972.
- Bradke, Louis, et. al. Intensive Play: A Technique for Building Effective Behaviors in Profoundly Mentally Retarded Young Children. Education and Training of the Mentally Retarded. (CEC Publication), Vol. 7, No. 1, February, 1972.
- Cratty, B. J. Some Educational Implication of Movement. Special Child Publications. Seattle, 1970.
- Cratty, B. J. Movement, Behavior, and Motor Learning. Philadelphia: Lea and Febiger, 1967.
- Cratty, B. J. Physical Expression of Intelligence. Prentis Hall, Englewood Cliffs, 1972.
- Delecatto, C. The Treatment and Prevention of Learning and Reading Problems. Springfield, Ill. Charles C. Thomas, 1959.
- Edgar, C. L. Rationale and Methodology of "An Admission-Release Program for the Severely Retarded". H.I.P., 1971. Pacific States Hospital.
- Edgar, C. L., Ball, T. S., McIntyre, R., and Shotwell, A. M. Effects of Sensory Motor Training on Adaptive Behavior. American Journal on Mental Deficiency, Vol. 73, No. 5. March, 1969.
- Eyman, R. K., Tarjan, G., and Cassidy, M. The Natural History of Acquisition of Basic Skills by Hospitalized Patients. Pacific States Hospital. Reviewed by Edgar, C. L., Gains of H.I.P., Children, January, 1969 to January, 1971.
- Frostig, M. and Horne, D. The Frostig Program for Development of Visual Perception. Chicago, Follett, 1964.

- Gettman, G. N., Kane, R. R., Halgren, M. R., and McKee, G. G. The Psychology of Reading Programs. Chicago, Lyonne and Carnahan, 1966.
- Held, R. Plasticity in Sensory Motor Systems. Scientific American, 1965, 213, 84-94.
- Held, R. and Bossum, R. Neonatal Deprivation and Adult Rearrangement: Complimentary Techniques for Analyzing Plastic Sensory Motor Coordinates. Journal of Comparative and Physiological Psychology. 1961, 54. 33-37.
- Held, R. and Freedman, S. Plasticity in Human Sensory Motor Control. Science, 1963, 142, 455-463.
- Held R. and Hein, A. Movement Produced Stimulation in the development of Visually Guided Behavior. Journal of Comparative and Physiological Psychology. 1963, 56, 872-876.
- Hunt, McV. and Uzgiris, I. C. Ordinal Scales of Psychological Development. (Mimeographed paper, Department of Psychology), University of Illinois, Champaign, Illinois, 1968.
- Kephart, N. C. The Slow Learner in the Classroom. Columbus: Merrill, 1960, 1971.
- Kolburne, L. L. Effective Education for the Mentally Retarded Child. Vantage Press, New York, 1965, Pages 10-11.
- Lynch, Francis. Proceedings from the Regional Topical Conference. The Severely Multiply Handicapped, What are the Issues? Sponsored by the Rocky Mountain Regional Resource Center, March 6-8, 1974.
- Maloney, M. P., Ball, T. S., and Edgar, C. L. Analysis of the Generalized Ability of Sensory Motor Training. American Journal of Mental Deficiency. Vol. 74, No. 4. Jan., 1970.
- Mecham, M. J. and Berko, F. G. Communication Training in Childhood Brain Damage. Chas. C. Thomas, Springfield, 1966.
- Mikaelian, H. and Held, R. Two Types of Adaption to an Optically Rotated Visual Field. American Journal of Psychology, 1964, 77, 257-261.
- Pearson, P. H., Williams, C. E. Physical Therapy Services in the Developmental Disabilities. Springfield, Illinois: Charles C. Thomas, 1972.
- Robbins, M. Test of the Doman-Delecatn Rationale with Retarded Readers. Journal of American Medical Association, 1967, 202, 389-393.
- Sherington, C. The Integrative Action of the Nervous System, New Haven, Connecticut, Yale University Press, 1948.

- Stockmeyer, S. A. A Sensory Motor Approach to Treatment. In Pearson and Williams, Physical Therapy Service in the Developmental Disability. Pages 186-221.
- Wepman, J. M., Jones, Lyle, V. Bock, R. D., and Van Pelt, D. Studies in Aphasia: Background and Theoretical Formulations. Journal of Speech and Hearing Disorders, 1960, 25, No. 4. 223-237.
- Wilson, V. and Parks, R. Promoting Ambulation in the Severely Retarded Child. Mental Retardation, Vol. 8, No. 5. Oct., 1970.

APPENDICES

Appendix A

Cognitive Tasks

(* - Observe for occurrence

** - Teach)

I. Visual pursuit and object permanence

- ** 1. Follows object (visually) through 180 degree arc.
- * 2. Glance lingers where object disappears.
- ** 3. Seeks and obtains object partially hidden (May use food or other reward under object).
- * 4. When an object disappears and reappears; watches for it to return when disappears again in same place.
- ** 5. Searches for and obtains object hidden under cloth or some other type screen (May use food or other reward under object).
- ** 6. Searches correctly for object disappearing alternating under one of two hiding places or pieces of cloth (May use food or other reward under object).
- ** 7. Searches correctly for object hidden randomly under one of three screens (May use food or other reward under object).
- ** 8. Searches for and obtains object hidden under three superimposed screens (May use food or other reward under object).
- * 9. Follows object (visually) through one hidden displacement with one cloth or other similar screen.
- *10. Follows object through one hidden displacement with two screens.
- *11. Follows object through one hidden displacement under two screens alternately.
- *12. Follows object through one hidden displacement under three screens randomly.
- *13. Follows object through successive displacements in the order of hiding.
- *14. Follows a hidden object through successive displacements with evidence of reversibility (i.e., may go directly to last place of apparent hiding first).

II. Development of means as separate from end result

- *15. Hand watching: Eye-hand coordination.
- *16. Producing interesting spectacle such as hitting mouse to make it squeak.
- *17. Grasping with hand and object in view; such object as bell or rattle.
- *18. Grasping with only object in view.
- *19. Dropping an object from one hand before reaching for a third object.

- **20. Use of means of support with or without demonstration (May use food).
- **21. Use of locomotion as means for obtaining object (May use food).
- **22. Use of string as means horizontally (May use food).
- **23. Understands support as means for obtaining object, such as climbing on stool to reach something.
- **24. Uses string as means vertically, with demonstration (May use food).
- *25. Uses stick to maneuver object, with or without demonstration.
- *26. Figures out folding to get necklace in container.
- **27. Avoids trying to stack solid cone on color stacking cone.

III. Imitation

A. Gestural

- *28. Imitates vertical striking
- **29. Copies a familiar gesture such as waving bye-bye, shaking hands, etc.
- *30. Partial imitation of horizontal hitting of blocks together.
- **31. Succeeds in hitting, horizontally, blocks together with progressive approximations.
- *32. Imitates hitting blocks horizontally without approximations.
- **33. Imitates at least one unfamiliar gesture such as blinking eyes.
- *34. Makes some movement toward imitating at least one invisible gesture, such as pulling ear lobe on side turned away from child.
- *35. Succeeds in imitating an invisible gesture.
- **36. Succeeds in imitating several unfamiliar gestures.

B. Vocal

- *37. Cooing.
- *38. Attends better to adult when he utters sound which child commonly makes.
- *39. Vocalizes more when adult utters sounds which child commonly makes.
- *40. Imitates in a very rough way, adults vocalizations of sounds child makes.
- *41. Imitates rather accurately adult vocalizations of sounds child commonly makes.
- *42. Vocalizes his usual sounds when stimulated by adult with unfamiliar sounds.
- *43. With adult vocalizing models of unfamiliar sound patterns, infant imitates these patterns by gradual approximations.
- *44. With adult vocalizing an unfamiliar sound pattern, the child imitates the pattern immediately.
- **45. When adult vocalizes them, child imitates whole words, through gradual approximations.

IV. Operational Causality

- *46. Hand watching behavior is observed.
- *47. Attempts to use own hand as causal agent to perpetrate operation of a musical toy.
- *48. Will peek in _____ to see contents inside.
- *49. Indicates recognition of other person as causal agent for some operation.
- **50. Tries to get other person to perpetuate operation of interesting event.
- **51. Attempts to imitate causal manipulation for operation of mechanical toy.
- *52. Searches for means to cause operation of unfamiliar toy.

V. Construction with objects

- *53. Slow alternate glancing at two objects in approximation.
- *54. Rapid alternate glancing at two objects.
- **55. Ear-eye coordination implied by correct localization of source of sound (with eyes to both left and to right).
- *56. Eye-hand coordination implied by mature grasping of an object held in front of infant, (similar to #17).
- *57. Follows trajectory of rapidly falling object to where it lights when object remains visible.
- **58. Follows trajectory of rapidly falling or flying object till it escapes vision and searches for it when it has become invisible where it comes to rest.
- **59. Differentiates front side from reverse of objects, such as whistle.
- *60. Appreciates relationship between container and contained.

SENSORY MOTOR LEVEL (1st 2 years)

Cognition and Language

Child's Profile of Skills in _____

Type Program

L E V E L							63									
							62	73								
					36	45	61	72								
					35	44	60	71								
	13	14	27		34	43	52	59	70							
	11	12	25	26	33	42	51	58	69	84	85	96	97			
	9	10	23	24	32	41	50	57	68	82	83	94	95			
	7	8	21	22	31	40	49	56	67	80	81	92	93			
	5	6	19	20	30	39	48	55	66	78	79	90	91			
	3	4	17	18	29	38	47	54	65	76	77	88	89			
	1	2	15	16	28	37	46	53	64	74	75	86	87			

Gest. Voc.

V
I
S
U
A
L

P
U
R
S
U
I
TO
B
S
T
A
C
L
E

M
A
N
A
G
E
M
E
N
TI
M
I
T
A
T
I
O
NC
A
U
S
A
L
I
T
YC
O
N
S
T
R
U
C
T
I
O
NU
S
E

O
F

O
B
J

O
R

T
O
O
L
SR
E
C
E
P
T
I
V
E

L
A
N
GE
X
P
R
E
S
S
I
V
E

L
A
N
G

Appendix B

VERBAL COMPREHENSION FOR GREATER EASE IN
MANAGEMENT

<u>Phase 1</u>	<u>Phase 2</u>	<u>Phase 3*</u>	<u>Phase 4*</u>
Verbal Stimulus	Response	Verbal Stimulus	Response
Say name of the patient	Touch patient (orientation arousal)	Describe behavior activity you wish to take place, briefly (2 or 3 words)	Desired behavior activity (may be either passive or spontaneous response)

Model for Training Verbal Comprehension

Communication Training Assignments for Teachers and Aids:

<u>Activity</u>	<u>What Teacher or Aid Should Say Just the Second Before Beginning Activity** (words to be stressed are underlined)</u>
1. Ball therapy	"Now we <u>go up</u> on the <u>ball</u> ."
2. Sit-ups	"Okay, <u>sit up</u> ."
3. Scooters	"Now we <u>go on</u> the <u>scooter</u> ."
4. Angels	Use vocal command before beginning each movement; see instructions outlined by Mr Jex. "Roll."
5. Rolling	"Now we <u>go on</u> the <u>horsie</u> ."
6. Rocking horse	"Okay, <u>rock-a-bye</u> ."
7. Standing board	"Now we <u>go on</u> the <u>standing board</u> ."
8. T-stool	"Now we <u>go on</u> the <u>T-stool</u> ."
9. Tube sitting	"Now we <u>sit in</u> the <u>tube</u> ."
10. Mattress rocking	"Now we <u>rock on</u> the <u>bed</u> ."
11. Mattress work	Use vocal command before beginning each activity; see instructions outlined by Mr. Jex.

*Phases 3 and 4 of verbal comprehension training should be followed by each teacher or aid for each of the activities. Phase 1 and 2 should be used each time teacher or aid come up to the child to begin training activities.

**Use of other phrases, if deemed more appropriate, is permissible as long as the same phrase is always used.

HUMAN ECOLOGY AND HUMAN CARE

BY

William C. Rhodes

University of Michigan
Ann Arbor, Michigan

A Paper
Presented at the
National Regional Resource Center Conference
Reston, Virginia
September, 1974

BIOGRAPHICAL SKETCH

William Conley Rhodes is a Professor of Psychology at the University of Michigan, Ann Arbor, and Program Director of the Institute for the Study of Mental Retardation and Related Disabilities, University of Michigan. Dr. Rhodes, a native of Louisiana, pursued his initial degrees at Emory University, Atlanta, Georgia, and received his doctorate from Ohio State University, Columbus. Prior to his appointment at the University of Michigan, he directed the Peabody Child Study Center in Nashville, was a professor at George Peabody College, and served with the National Institute of Mental Health.

Dr. Rhodes has implemented experimental community intervention projects and studies since 1954, and is widely published on the subject of emotionally disturbed children. He is presently on sabbatical leave and resides in Tennessee at the New Academic Village, an experiment in Community living for academic types.

AUTHOR'S CONCERNS

Human Ecology and Human Care

1. What sorts of questions are appropriately handled within the Ecological Framework?
 2. What sorts of value issues related to education are raised in the Ecological Framework?
 3. What is deviance: What is an Exceptional Child?
 4. What are some specific school issues that are correlated with the ecological perspective?
 5. What will happen -n the next few years in the area of labeling and classification? Is there an alternative to assessment?
 6. What is the relationship between human ecology and human services?
 7. What does human ecology have to do with a quest for community, particularly in relationship to a community of growth and learning?
 8. How do we bring an ecological balance into our own lives?
 9. How do we get back together?
 10. Why begin from scratch to construct a new learning setting instead of taking advantage of existing educational systems?
- J

New Academic Village
August, 1974

HUMAN ECOLOGY AND HUMAN CARE

Perspective

When you adopt the human ecology point of view, you find yourself immersed in value questions, just as you do when looking at physical ecology. Like the Sociologist, you find your perspective to be more and more inclusive. You extend your time-frame so that you look at a long succession of events rather than a brief, short sequence of events. History becomes important. If for instance, you try to understand what is going on in public schools today you must go back to look at the origins of compulsory education. You also extend your place and locus frame so that you consider the interdependence between a particular setting and the people occupying positions within that setting. And also, the interdependence between that setting and adjacent settings. Culture becomes important. If you are, for example, concerned with the "exceptional child" you have to consider the system out of which that very title of exceptionality grows. When history and culture become part of your consideration, then values enter the arena of your concern, because both history and culture have strong value determinants. For instance, particular historical incidents and particular cultural values have determined who and what is deviant in human conditions which exist in particular historical periods and particular cultures.

When values enter your arena of concern, then your own personhood can not be excluded. Your personal values are drawn directly into the center of your own views, and suddenly you have moved beyond studying and you are experiencing very directly what you started out to study.

The Ecological Model, then, is a real-life model rather than a representation of an abstraction of real life. It forces you to be directly in the stream of life flowing around you and through you. The model can be made abstract and systematic if you force it into a valueless mold, but this requires a vast expenditure of energy on your part to hold it within that mold and to deny the experience currents flowing through you.

Of course, the experience currents are not without their own costs. They frequently rack you and overwhelm you with their own energy. When you become a direct part of the life flowing around you, and when you let it course through you, it sometimes becomes too big for you, too intense for you, and sometimes you find yourself tossed in its storms and flailing around for a quiet harbor, a safe ground. As we all know,

life is not just peace and gentle quietness and happiness. It is also tempestuousness and pain and violence and confusion. But when you are in the midst of such life, and it is flowing strong through you, you know you are alive and not alienated from what is happening to you, through you, and around you. In representation models, such as most psychological and sociological theory models, one does not have to experience the content of the model. The usual cultural and theory perspectives that you and I have borrowed to give control of life around us, to put events and experiences in their place, to try to separate the safe part of the world from the dangerous, the good part of the world from the bad, the peaceful from the tumultuous---that I think, has alienated us. In exchange for an assumed certainty we have paid the price of separateness and loneliness. We not only have alienated ourselves from the world around us, but from others joined in a common cause with us; and, most of all, we have alienated ourselves from much of our own experiences. We do not allow ourselves to know directly what we feel and what we are.

The organized pictures which we have been handed to control our world, to control environment, to control emotions, tends to lock us into those pictures. We try to force our experiences to fit them and when our experiences do not, we deny legitimacy to these experiences. The more elaborate our mind pictures become, the more restrictions we place upon the world around and within us. Now it is true that all cultures build systematic mind pictures of this sort, but our culture has gone further. We have carved out in our society elaborate processes and groups of specialists to formalize these systematic pictures of our own experiences in our own culture. From one point of view these theories have helped us understand ourselves and our behavior much better than we did before. From another point of view this specialization has had the effect of limiting us even more than earlier cultures and locking us more tightly into a constraining perspective on our own experiences and those of other's living through these experiences with us.

The ecological perspective helps us break free of this tight lock. Instead of compartmentalizing our experiences and our world and excluding more and more of the world as some perspectives may tend to do, it opens us up again to the wider world within and without. This can be painful in the beginning, like blood returning to a numbed limb after the circulation has been cut off, and there may be an initial impulse to retreat to the numbness. But along with some pain, our experiences become sharper, clearer, more immediate and direct.

This, I believe, is very important for learning; and the only way in which learning ties us into our world. It doesn't seem logical that there should be filters between us and our world, or between us and others joined in experiencing the world with us. The child learns fast when he is one with the world and, therefore, has difficulty in learning what is me and not me, what is ego and what is world.

It seems to me that most of our modern mind pictures of who we are and what we are concentrate on separating "me" and "not me", giving us a distinct sense of independence from our surroundings, from others; and, in the long run, from much of what is going on inside ourselves.

We spend considerable time teaching children how to make these distinctions. We teach them how to think about things, rather than helping them to experience things. We give them tool after tool for breaking down their world into separate parts and pieces. We break up time for them into artificial schedule sequences. We break down settings for them into distinct behavioral and attitudinal places--the play place, the study place, the love and caring place. We break down people for them into the teaching people, the loving people, the black and white people. We break down behavior for them into appropriate behavior and inappropriate behavior, smart behavior and dumb behavior, normal behavior and abnormal behavior. The "me" that we teach them is a "me" that looks out on the world and carefully sorts it into these bits and pieces. And we teach them that they must never get these things mixed up, because when they do get them mixed up, then they are mixed up; and the worst thing in the world is to be mixed up. When they are mixed up they are lost and must find themselves.

We educators have developed many ways of helping them find themselves when they are lost. We have developed all sorts of special people to show them how to find themselves. Most of the specialists and their ways of relocating lost children involves a process of teaching them how to separate and pigeonhole themselves. They are taught the right pigeonholes as opposed to the wrong pigeonholes and are guided along the path of the right ones.

In a way the ecological perspective is a corrective for this tendency of our organized mind sets---cultural, philosophical, and theoretical---to differentiate ourselves, our world and our experiences into smaller and smaller bits, which seem manageable and understandable. Furthermore because of its conscious admission and inclusion of values, it brings us directly into experiencing those things we start out to study. We experience ourselves and our worlds more realistically and more immediately. We begin to find it difficult to differentiate ourselves from others or see ourselves as coming from different places than others. We begin to find it difficult, for instance, to divide the world into normals and abnormals, sick and healthy, bright and dumb, handicapped and non-handicapped.

An Odyssey

Let me make a radical shift now from the philosophy of human ecology and show you what the perspective has done to, and for, me personally. You might say that, as I shift, I'm moving from the point of view of

sketching the broad rationale to the point of view of some of the consequences of that rationale. I am now going to give an example of the way in which the determinants of the ecological frame of reference begins to have direct personal impact upon the individual holding that frame of reference.

I know that part of the following account is unrelated to the ecological frame of reference, and that I might have arrived at where I am even without such an orientation. Nevertheless, I have been influenced by the adoption of ecological thinking, and the way my own values have grown around such thinking.

My major area of interest for many years has been human deviation, and more specifically, child deviation. I have been fascinated with the inconsistencies and the unknowns in the area of emotional disturbance, delinquency, mental retardation, homosexuality, etc. When the Hippie movement started I was struck with the similarities between the social position of this group and the position of these categories of children which I worked with professionally. Over time I began to see that any of these human conditions were part and parcel of a social-psychological situation which could only be described as ecological. Disturbance, delinquency, retardation, etc. could not be understood without understanding the ecosystems in which these conditions were embedded.

As I saw it, the individuals who filled these deviance niches were social hostages, occupying captive positions in an ecological table-of-organization. These positions were reciprocals of the positions occupied by us professionals. Within the ecosystems that we serve, these deviance positions are just as necessary to the continuity and maintenance of the overall ecosystems as ours is, and our positions as professionals are directly dependent upon theirs. In a literal sense the deviance niches within the ecosystem are permanent slots in the overall network, just as real as the slots of principal, first-grade teacher, superintendent, etc. Each time a deviancy position is vacated, an immediate recruitment process moves into gear to fill the slot again. Of course we do not do this consciously and officially. In fact, I believe we do everything possible to conceal from ourselves the machinery and the operations which gear up when deviance positions are vacated.

This process of filling deviance positions occurs not only in social sub-systems like schools, but also occurs systematically in larger ecosystems like towns and cities. The fascinating work of Durkheim in the area of suicide showed that each city, across European countries, maintained its own characteristic and unique suicide rate even when there was a total changeover in population. The early work of the Chicago School of Sociology under Parks and Burgess showed that within cities there were sub-areas which maintained their own characteristic rates of such conditions as alcoholism, suicide, mental illness, delinquency, retardation, etc.

Such findings were very important in my own development. I was a psychologist for many years, working with individuals who, I thought, needed help. I also worked as a teacher or psychoeducator with children who seemed to have serious disabilities. I felt that I was learning techniques and developing techniques which change them so that they were better adapted, had a better self-concept, and were modified in their behavior. I taught and supervised psychotherapy and psychodiagnostics. I taught and supervised special education.

In my own relationship to individuals in the clinic or the therapeutic classroom, I began to have doubts about any simplistic, individual-blaming theory or intervention process. Not only did I come to see that I could not really distinguish between the sick ones and the well ones, but that the selection of people for these slots had relatively little to do with what they were. True, what they were and how they reciprocated with the selecting process helped confirm them as labeled individuals. Furthermore, the way in which they played and their role once they were captured in the service delivery program also played a part---sometimes a very minor part, in maintaining them in the deviance process. However, there were many factors lying outside of them that helped confirm them and hold them as the retarded, the delinquent, the queer, the mentally ill one, etc. The specific behaviors that they engaged in, which helped place them in the deviant niches, were not the essence of the deviant positions they occupied; because I soon discovered that many of us, or even all of us, engaged in some of the same behaviors, experienced some of the same experiences, thought the same thoughts, etc. It seemed to be a combination of certain circumstances occurring in conjunction with these behaviors, traits, etc. that created a deviant career. Furthermore the career was viable for the individual only so long as it was embedded in a particular ecosystem. For instance, educable retardation exists only in a school system, and then, only in a school system that has an educable program.

I began to be very conscious of the larger social needs which deviants in general served for the society. From an ecological orientation, the closer one looked at the phenomenon the broader it became. For one thing, it was quite obvious that the deviants were social hostages. They were hostages to the needs, processes and organizational machinery that society had built to service society's deviance predicament. The deviant predicament was many-fold. In the first place our society had ruled out certain behaviors, characteristics, traits, etc. as being unproductive and unacceptable to the society, and yet these characteristics, behaviors, and so forth continued reappearing in many individuals in the society. Actually, once tabooed, there was really nothing that could be done to wipe them out even if we really had the determination to wipe them out. The deviance predicament existed also in the fact that these tabooed human conditions represented critical incidents in the history of this country--such as the overwhelming influx of immigrants between the Civil War and World War I that upset the homogeneous balance of this country--

which was never resolved. The deviance predicament also was occasioned by the fact that we have built vast machinery and personnel devoted to serving and solving deviance and without an earmarked deviant population, this army of programs, facilities and personnel would be in jeopardy. It would be a disaster in terms of economics, identity and status, and organized positions in society. Finally, there is a deviance predicament in our society because that organized army defends the majority of the society from confrontation with deviance in themselves and others as a real part of the human condition. As long as we have mental health programs, special education programs, corrections programs, etc. we are not forced to go through the horrendous dislocations involved in re-examining our culture, our psyches and our value stances.

We can take caring for granted. We can assume that what we do now, how we live now, how we reach out to those whom we consider unfortunate--that this is caring. We do not have to face caring in ourselves and our culture. From my perspective and the experiences I have been through and am going through, caring has gone underground. It is subterranean and buried beneath the avalanche of care-giving programs, services and technologies. I would imagine that what you would like me to be talking about now is the techniques of intervention: the methods, the systems, which come out of the ecological perspective. Yet, I cannot do that because it would only bury the caring process beneath still another set of technologies for bringing about change in people.

It seems to me, at this point in time, that direct caring---the direct immediacy of the experience of caring for, and being cared for---has to be recovered, exercised and strengthened. Direct caring---the overflowing, energizing, soul-quenching, experience is a seed which needs nourishing. It is a power which is not being used anywhere near its capacity. All that we experience now, as we go about our professional tasks, I think, is a pale echo of that power. And yet, I feel it all around me, coming to a new birth in the culture, to a new realization in certain people in the culture.

The kind of caregiving that we know as professionals is an experience mediated by layers of programs, institutions, and technologies. We care objectively, impersonally, and dutifully, through the facilities and organizations established in our society to mete out care. We abide by the limitations set upon us by those massive care-delivery structures and organizations. We do not make direct contact with those we care for because of service delivery taboos and restrictions. The organizational, professional and theoretical guidelines which direct our caring impulses specify all aspects of our caring relationships. Our positions and our position-descriptions specify how we are to distance ourselves from our clients and who our clients should be. We are not to reveal ourselves to them in the way they reveal themselves to us. We are never to be the helped ones, but only the helping ones. We are paid to care for them.

I believe there is another way of caring, a more direct, more immediate, more unimpeded way. This is a person-to-person caring, a mutual, intimate, free-form way of caring. It is reciprocal caring in which people enter into covenants with each other to care for each other. Those in covenant assume equal responsibility for each other. Each shares himself in whatever he is with each other.

In this type of care there is an admission of weaknesses and strengths in all of us. Differences are accepted as part of all of us. There is no division of the world into sheep and goats, deviant and non-deviant. This does not mean more acceptance of any trait or behavior, no matter how debilitating, but rather that each person, seeking growth, relies on the other to help him or her toward growth. Each tries to contribute to the fulfillment of the other.

This type of caring becomes a way of life in which each person tries to give full range to caring impulses and, through exercise, tries to develop his or her caring capacities to the fullest. In this respect caring is not a profession, but a life-style. It becomes a core around which life is built.

History of Care Delivery Systems

In my introductory remarks about the ecological perspective, I mentioned the fact that ecological thinking caused you to extend your time-range and bring history into consideration. Now I would like to talk briefly about what has happened to the caring impulse in our own society, and, as a consequence, in the individual who is socialized into a professional care-giver in our society. Let us take a brief look at the roots and growth of the care-giving industry in the United States. How did care-giving become the formal, bureaucratic giants reflected in H.E.W. and in the Justice Department? How did it happen to become so centralized? How did care-giving services happen to follow the model of industry, with its hierarchical organizational form, its tables of organization for personnel, central and branch offices, executive and line structures, in-put and out-put processes, etc.?

These are fascinating questions of an historical nature which I and my research colleagues have explored extensively over the past few years. Our findings and results are reported in Volume III of the Conceptual Project in Child Variance. I do not want to cover that material here, except to say that the history of the educational, welfare, correctional, and mental health systems are integrally tied to the history of this country. The giant service-delivery cartels grew out of real dilemmas in the historical development of the United States. We did not arrive at our present system of public education, mental health, corrections and welfare by chance. The historical dislocations occasioned by slavery and its abolition and the overwhelming influx of Eastern and

Western European immigrants into our unprepared cities in the period between the Civil War and World War II are still with us today. The imprint of these momentous events and their residue has been crystallized into the massive machinery of compulsory education, welfare aid, corrections and mental health.

The caring impulses of this nation were strongly attenuated by fear and threat raised by these strange people, their strange cultures and their frightening differences. Their presence was correlated with the wrenching shift from the centrality of an agrarian, village-centered, uni-cultural, Protestant-dominated, English-speaking society to the decentralization of an industrial, urban-centered, multi-cultural, multi-language society. These events and related reactions had their impact in shaping the present model of education and care-delivery. In my own reading of history, the monolithic organizations which now specialize in institutional caring are direct descendents of these disturbing events.

It is only at this period in history, when we have assimilated these massive disfunctions that we are beginning to examine the outcome of these events upon our society and its grinding values. It is only now that the deep caring impulses of this nation, which gave birth to a land which was a haven for all the oppressed and alienated deviants of the world, can begin to work its way through and be rejuvenated in all its strength and splendor.

As I read the current scene, there is a growing new pressure to reexamine the types of institutional caring solutions we developed in response to these earlier events. There is growing dissatisfaction in the nation with the major public childcare systems and their philosophical and methodological foundations. Ecological thinking is beginning to influence this examination. The constellation of science, psychological, economic, and power factors which coalesce to create major human care industries such as public education, welfare, mental health, etc. are under scrutiny. The crossfire upon the systems is taking aim at different aspects of each system, but the total impact and pressure is beginning to mount. The pressure of minority groups, of parent groups, of advocates, of lawyers and litigation processes, of the client-systems, of social critics, etc., is growing. Attacks on classification or labeling, on placement, on institutional peonage, on main-stream exclusion and extrusion, etc. are forming a clear pressure pattern. My own prediction is that these massive, federalized, human service institutions are in a beginning phase of decline and fall. I wish that we had time to examine this statement of mine more closely, but we do not. Instead, I would like to move on from this brief review of the past and current scene in institutionalized care-giving to a more personal statement of its meaning today.

A Caring Community

My own studies of Child Variance over the last five years has had profound effects upon me. The cognitive changes resulting from my own experiential confrontation with the whole socialized caring reality in this country has led to some major departures in my life.

Over the past three years I have been exploring the meaning of care and caring, both personally and communally. I have been exposing myself to new facts of caring, new experiences in giving and receiving care from others. For me, I am discovering a whole unmapped territory. It is a strange land, one with many nooks and crannies out there and inside me that I did not realize existed.

I have deliberately tried to recover, inside myself, the initial zeal and force that impelled me to move into the professional care field. Professional training taught me to suspect that motivation within myself and to put social-personal distance between myself and my care object. I understand why these cautions have come into our field, but I think it has been a mistake to learn to hold ourselves aloof. I think it makes us more vulnerable to social manipulation by the more repressed, power-motivated segments of society. Instead of teaching society to care for its own diversity we are reciprocating in repression and extrusion. We are reinforcing the idea that so many people have, that their true nature is bad; or that there are many parts of themselves, and many styles of life that they could live which need to be contained, modified, or treated. This is an oppression-oriented philosophy which considers many aspects of human growth and learning to be dangerous and threatening.

In the last few years I have been trying to examine my professional indoctrination, and to loosen the strong controls that institutional contingencies exert upon me. This is not to say that I believe I can or should be free of my environments, but you and I are environment-creating as well as environment-reacting creatures. As we clarify our values we must look at the kinds of environments we want to create, and not just remain captives of the ones handed to us. Since I have moved so deliberately into caring values and since I want to explore my own and others' caring capacities, then I have to find or create caring environments. I realize that I can not do this alone, so I am trying to make covenants with others who are exploring the same dimensions of themselves and their environments.

The particular road which I have taken is to try to develop counter-controls on my environmental systems so that I can see them more clearly and feel less determined by them. At the present time I am in the process of cooperating with a few other people to try to establish an alternative eco-system of caring which might fulfill more of our basic need to be of service to others. It is hoped that our experimentation can lead to an environment in which caring can take on a new life, a new

strength. We are trying to develop a covenant community in which human care might become the center of a more integrated, more cohesive style of life. We do not believe that such a community can be completely free of existing institutions, but it needs the separation, the distance and protection that any new culture would need to self-consciously develop itself.

I am on sabbatical from the University of Michigan and am down in Tennessee, on a farm, trying to bring a New Academic Village into existence. We are trying to create a stronger sense of community, and of ourselves in community as a new energy-source for our own lives; and hopefully, for the lives of others. We are trying to evolve an environment within the larger ecosystem, in which to be whole and feel whole, with an ever-present sense of growing and developing---you might say we are trying to shape a new learning environment. In fact, we see ourselves as one of the new living and learning centers which are being experimented with across the country.

We do not want to be separate from the larger society around us, but are trying to create a special eco-system which can be a place for experimentation and training in how to seek community wherever you are.

The process is not easy at any level. It is personally demanding, like a total therapeutic process experience. It makes great demands; but my own experience has been that it also gives great returns and fills a hunger for intimacy, mutuality and fulfillment that is difficult to satisfy in the busy, impersonal environments that have been handed down to us.

Most of all we want to help lay the ground work for a new caring ecology and to ferret out the elements of multiple alternatives to the present care-giving corporations which are obviously in distress. The S.O.S. signals emanating from Public Schools, Welfare Departments, Prisons and Corrections, etc. are very loud and clear. It is obvious that some type of transition is in process. It also seems obvious to me that the piece-by-piece tinkering that we are doing within these care-giving systems has not turned things around. The uniform solution orientation of this country which led to huge corporate monopolies of education and care-giving grafted onto the state seems to have reached its limits. More funds, more personnel, more facilities, more research, more training does not seem to be making a great enough difference to justify this approach.

Summary

Meanwhile, many people, in many places, are trying out new things. There has been a new opening up of the society to varied directions. People are trying to look at the whole human environment and the ways

in which it either exalts or diminishes men and women. Value clarification has blossomed as a major enterprise. The interrelationship of person and environment is being studied as it has never been studied before. We are looking more deeply at differences and deviances, and the mind-pictures we have developed of who is in and who is out. There are some of us who are beginning to celebrate deviance as the leavering which will free all of us of the tyranny we exercise over ourselves in the name of adjustment, adaptation and success. There is an important thing going on that is touching all of us. I have no idea where it will go, or what it will do. I only know that it is dynamic and very much alive.

Questions °

1. What sorts of questions are appropriately handled within the ecological framework?

All of the questions that are handled within individual oriented theories such as the biophysical, behavioral and psychogenic, plus those that are raised by environmentally oriented theories. However, these theories make sense within the ecological orientation only when they consider both sides of the person-environment interaction. For instance, when Paul Graubard used behavioral theory to teach "problem" children to counter-control teachers and/or peers, he was using behavioral modification with an ecological orientation. He was focusing not only upon modifying the child. Instead, he was concerned with the dual interaction. This was a decidedly new use of behavioral theory, and addressed itself to both sides of the "problem". At a broader level, the analysis that Jane Mercer has made of the deviance-processing part of the school system in the area of mental retardation, is more clearly an ecological analysis. Mercer has asked the question: "What are the limitations of the clinical and statistical constructions of mental retardation?" Her answer has been, essentially, that they are biased conceptions of the "problem". Actually, she says, the tag "mental retardation" is a system processed category. The events which capture a person within that label are system-related events. A critical set of system processes, which have little to do with intellectual capacity, selects certain children into, or drops them out of, the ecological network that leads to a school niche which is labeled "mental retardation".

Even broader questions become eligible for consideration in the ecological framework. For instance, this framework admits into consideration historical methodologies which examine the roots of compulsory education and the way in which special education grew out of the dilemmas which compulsory education made for the educational administrator. When you sweep up all of the kids on the streets, from all forms of diverse cultures and varied styles of home life, you have polymorphous types in a uni-morphic life setting. There is bound to be mismatches. Special education can thus be viewed as an attempt to compensate for the mismatches.

Read:

Graubard, Paul, Little brother is changing you. Psychology Today, March, 1974.

Wagner, Melinda, Environmental Interventions in Emotional Disturbance, in Rhodes, W. and Tracy, M. Studies in Child Variance, Vol. 2 - Interventions, University of Michigan, Ann Arbor, 1973.

Mercer, Jane, Labeling the Mentally Retarded, University of California Press, Berkley, 1973.

Rothman, P. J. The Discovery of the Asylum, Boston, Little Brown and Co., 1971.

Sells, S. B. Ecology and the Science of Psychology Multivariable Behavioral Research, 1966, 131-144.

Dunham, H. V. Current Status of Ecological Research in Mental Disorders, in Rose, A.H. Mental Health and Mental Disorder, New York, W. W. Morton & Co., 1955.

2. What sorts of value issues related to education are raised in the Ecological Framework?

Fundamental educational issues are growing out of ecological thinking. For instance, legal and ethical issues regarding labeling and placement, ethical issues related to socio-economic biases in school programs, issues related to sex and sex-education, issues related to civil rights of parents and children. These current burning issues are ecologically-oriented issues in which the spotlight turns away from the uni-directional perceptions of the educator and turns back upon the culture, the school setting and the educator. The interaction-effects now come under purview and an accounting has to be given by systems as well as target populations of those systems.

Read:

Rhodes, W. & Head, S. Studies in Child Variance, Vol. III, Service Delivery Systems.

Adams, P. L. & McDonald, N. F. Clinical cooling out of poor people, 1968.

3. What is deviance: What is an Exceptional Child?

Ecological thinking is raising disturbing questions about the meaning of exceptionality and the related concept of deviance. Who decides what

is normal and what is abnormal? What is the basis of such decisions? How much cultural bias, how much cultural control, how much maintenance of power is involved in assigning certain children to the "other side of the wall", the side outside the mainstream? Sociological theories of deviance, "anti-psychiatry", "radical therapy" and "radical education" are all turning to this question. They raise serious concerns about the socialization of professionals into a uni-dimensional reality which holds as an unmistakable fact the existence of mental illness, mental retardation and delinquency. In these examinations, values in human ecology become paramount.

Read:

Becker, H. S. Outsiders: Studies in the Sociology of Deviance. Glencoe, Ill. The Free Press, 1963.

Becker, H. S. The Other Side, London, The Free Press, 1964.

Rhodes, W. & Sagor, M. Community Perspectives. In N. Hobbs (Ed.) Issues in the Classification of Children - A Source Book on Categories, Labels and Their Consequences. San Francisco: Jossey-Bass, 1974.

Platt, A. M. The Child Savers: The Invention of Delinquency. Chicago, University of Chicago Press, 1969.

Gottman, E. Stigma. Englewood Cliffs, N. J.: Prentice-Hall, 1963.

Rhodes, W. C. A community participation analysis of emotional disturbance. Exceptional Children, 1970, 36, 309-314.

Benedict, R. Anthropology and the abnormal. Journal of General Psychology, 1934, 10, 59-82.

4. What are some specific school issues that are correlated with the ecological perspective?

Very specific issues such as whether or not schooling makes a difference; whether or not the style of classroom (i.e., open education, complementary education, etc.) makes a difference in learning; how do we move away from exclusion and extrusion into mainstreaming?; how can we advocate for children?; does litigation produce lasting changes?; can the educational system open up the surrounding culture or does the surrounding culture control the educational system?; what are the biases behind psychological testing?; does training improve the effectiveness of teaching? These and questions like them concern themselves with the interactive and reciprocal nature of child acting upon to being acted upon by the environment.

5. What will happen in the next few years in the area of labeling and classification? Is there an alternative to assessment?

The reaction against classification will be a major issue over the next 10 years. Two directions are possible. One is abolition of all categories, with an increasing emphasis on mainstreaming. The other is to maintain things as they are and continue increasing the proportion of labeled children.

Read:

Rhodes, W. C. and Sagor, Mark, Community Perspectives. In N. Hobbs (Ed.) Issues in the Classification of Children, San. Fran. Jossey-Bass, 1974.

Hoffman, Ed. in Rhodes, W. C. and Head, Sabin, Studies in Child Variance, Vol. III, Service Delivery Systems.

Lang, David. Segregation of poor and minority children into classes for the mentally retarded by use of IQ tests. In A Study of Child Variance, Conceptual Project in Child Variance, W. C. Rhodes, and Sabin Head (Eds.) University of Michigan, Institute for the Study of Mental Retardation and Related Disabilities.

6. What is the relationship between human ecology and human services?

Ecology provides a framework for examination of the overall man-made ecosystems devoted to human care giving. It provides a paradigm to study the organizational components, the institutionalization of society's service needs; the crystallization of social anxiety; projection, extrusion; the hostage functions of client systems; the structural symbiosis between health, educational, correctional, and welfare structures and the body politic, the historical seeds of the present care giving corporations, and the unification of all of these aspects into formal, contractual bureaus of care.

Read:

Rhodes, W. C. and Head, Sabin. Studies in Child Variance, Vol. III, University of Michigan, Ann Arbor, Michigan, 1974.

Rhodes, W. C. Behavioral Threat and Community Response, New York, Behavioral Publications, 197.

Durkheim, E. Suicide, Glencoe: The Free Press, 1951.

Joint Commission on the Mental Health of Children. The Joint Commission Report and NIMH Response. Mental Hygiene, 1969, 53, 497-499.

Freud, S. Civilization and its Discontents, London: Woolf, 1930.

Petras, J. W. and Curtis, J. E. The current literature on social class and mental disease in America: Critique and bibliography. Behavioral Science, 1968, 13, 382-397.

Foucault, Michel. Madness and Civilization, A history of insanity in the age of reason. Vintage Books, New York, 1973.

Fried. Social problems and psycho pathology (in) Group for Advancement of Psychiatry, Urban America and the Planning of Mental Health Services, 1964, 5, symposium 10, 403-446.

7. What does human ecology have to do with a quest for community, particularly in relationship to a community of growth and learning?

Human ecology reminds us that we have lost our sense of belonging to a community. It raises our awareness of the sense of alienation permeating modern, dissociated, unintegrated society. It reminds us of the possibility of wholeness, cohesiveness, "belonging", and suggests the natural biotics of human communities. It suggests mutual interdependence, the potential harmony of man-in-environment and the creative energy latent in man and woman's impulse to community.

It suggests the possibility of multi-varied environments of learning, of a more natural fit between polymorphous human cultural types and harmonious educative settings. It raises critical issues about the uniformity and standardization of public education structures. It looks at the monolithic nature of school systems, the prescriptive nature of fixed roles and functions, and the vertical, hierarchical distribution of power and control.

In this area, readings are not applicable. One needs to become directly conscious of his or her own experiences in communities, in schools and in ones own inner directions.

8. How do we bring an ecological balance into our own lives?

There are probably many roads to wholeness and balance. Each probably requires some form of self awareness, of immediate contact with ones own experience in his or her immediate, personal world. It probably requires a raising of consciousness of ones need for care and one's caring needs. It probably requires venturing out from ones protective shell and exposing the self to the imploding world bearing

directly upon the self. Balance seems to require that we periodically put aside the socialized realities and expose ourselves to different realities than those we have become fixed on.

Here and now, we need to experience each other, be aware of each other, acknowledge openly all those subterranean communications that go on between us. We need to become permeable systems, open to, and flowing into, other human systems.

We need to constantly search for ourselves and try to be ourselves in all facets of our own nature, no matter what it is. I need to be more and more Bill Rhodes and less and less a caricature of other living models.

9. How do we get back together?

I need to touch you and you need to touch me. This needs to be mature touching, touching that uses all our own experience, knowledge of the world and awareness of the limitations within and around us. I must reach out to you and let you feel my presence, let you see my vulnerability as well as my strength. You need to risk yourself with me, and any one of you who feels something strong for me, good or bad, you must present that to me.

We have to share fantasies and secrets. We should be strong enough to drop social facades and defenses for at least a few brief moments.

There is a risk in such ventures. The risk is that we may not like what we find out about ourselves in the process. But the self is made up of both good and bad, love and hate, and love is just as strong a seed as hate. The seed can be nurtured and the self can be changed. Exaltation in togetherness is a natural part of the human experience. We can know it as well as we know depression or boredom or alienation. Therefore, when we risk each other, we risk not only hurt and disillusionment, we risk love and warmth and togetherness.

10. Why begin from scratch to construct a new learning setting instead of taking advantage of existing educational systems?

Going through the process of trying to establish a totally new ecosystem of learning is important for several reasons.

a. There are no clean-cut existing models of a cohesive, integrated setting in which all of life is woven around a human ecology of learning. Therefore, the experiment of trying to create such a life-setting has to begin from scratch. Existing systems are not malleable enough for this attempt.

b. The process itself is a pioneer effort. There are several existing settings which began from scratch, such as Esalen, the Highlander Folk School, the Life Center, Black Mountain, etc. However, none have recorded the process. Since there appears to be a good chance that other experiments of this sort will be tried in the near future, someone should begin documenting the process as it is lived and experienced.

c. Without experiencing the act of development of such a setting, it is not possible to undergo the necessary changes that permeates one's total fiber. A cognitive change alone would not be enough. A change involving consciousness raising and value clarification would not be enough to modify one's total being. Therefore the experience must be lived in order to have maximum effect upon the participants.

102
103

PARTICIPANT DIRECTORY

Alcorn, Charles, Coordinator
Regional Resource Center
3202 N. Wisconsin
Peoria, Illinois 61603

Andereck, Paul
Project Officer
Learning Resources Branch
BEH - U.S. Office of Education
Regional Office Building 3
7th & "D" Streets S.W.
Washington, D.C. 20202

Ashcroft, S. C.
Director of NCEMMH
220 West 12th Avenue
Columbus, Ohio 43210

Beaumont, Gail
Project Officer
Learning Resources Branch
BEH - U.S. Office of Education
Regional Office Building 3
7th & "D" Streets S.W.
Washington, D.C. 20202

Beck, Theodore R.
Supervisor, Federal Assistance for
the Handicapped Program
Special Education Services
State Department of Education
Lansing, Michigan 48902

Bland, Elwood
Project Director
Learning Resources Branch
BEH - U.S. Office of Education
Regional Office Building 3
7th & "D" Streets S.W.
Washington, D.C. 20202

Bonham, Sam
Ohio State Department of Education
Division of Special Education
933 High Street
Worthington, Ohio 36109

Brown, Faye
Director, SSCLRS
Auburn University at Montgomery
Montgomery, Alabama 36109

Brown, Thomas R.
Special Education Section Chief
Pouch F
Juneau, Alaska 99801

Bruse, Benjamin
Specialist, Programs for the Handicapped
Utah State Board of Education
1400 University Club Building
136 East South Temple Street
Salt Lake City, Utah 84111

Buffmire, Judy
Director, Utah Regional Resource Center
2363 Foothill Drive
Suite G
Salt Lake City, Utah 84108

Bush, Kathy
Special Education Program
Division of Early Childhood and
Special Education
State Department of Education
Atlanta, Georgia 30334

Campbell, Tony
Division of Special Education
Vermont State Department of Education
120 State Street
Montpelier, Vermont

Carmody, Sharon, Conference Secretary
2406 Friendship
Iowa City, Iowa 52240

Clark, Robert
 Program Consultant
 721 Capitol Mall
 Sacramento, California 95813

Comba, John F.
 Director of Special Education
 Department of Education
 Len B. Jordan Office Building
 Boise, Idaho 83720

Cottrell, Raymond
 Director of Mid-East Regional
 Resource Center
 1901 Pennsylvania Ave. N.W.
 Suite 505
 Washington, D.C. 20006

Cook, John J.
 Project Director
 Wisconsin State Department
 of Public Instruction
 126 Langdon Street
 Madison, Wisconsin 53702

Crain, Jacqueline
 Assistant Director
 Instructional Materials Center Section
 Department for Exceptional Children
 OSPI, 1020 South Spring St.
 Springfield, Illinois 62706

Crosson, James, Director
 Regional Resource Center
 University of Oregon
 Eugene, Oregon 97403

Dagley, Myron T.
 Director, Regional Resource Center
 3202 N. Wisconsin
 Peoria, Illinois 61603

Deppe, Phil
 Associate Director
 Teaching Resource Center
 2090 Seventh Avenue, Room 111
 New York, New York 10027

Dodge, Gordon
 Special Education Section
 Minnesota Department of Education
 550 Cedar St.
 St. Paul, Minnesota 55101

Drain, Theodore R., Director
 Division for Exceptional Children
 State Department of Public Instruction
 Raleigh, North Carolina 27602

Feeler, T. J.
 Director of Special Education
 Programs Development
 Department of Elementary and
 Secondary Education
 State Department of Missouri
 P. O. Box 480
 Jefferson City, Missouri 65101

Feltner, Raymond, Director
 Midwest Regional Resource Center
 1332 - 26th Street
 Drake University
 Des Moines, Iowa 50311

Fisher, Thomas
 Director of LRC
 Ohio Division of Special Education
 933 High Street
 Worthington, Ohio

Gamser, Doris
 Special Assistant
 Office of the Deputy Commissioner
 B.E.H. U.S. Office of Education
 Regional Office Building 3
 7th St. and "D" Streets S.W.
 Washington, D.C. 20202

Gutierrez, Elei
 New Mexico State Director
 State Department of Education
 300 Don Gaspar Avenue
 Santa Fe, New Mexico 87501

Harris, Joseph
 Consultant RRC
 Teaching Resource Center
 The City University of New York
 144 W. 125th Street
 New York, New York 10027

Havelock, Ronald
 Associate Professor and Program Director
 Institute for Social Research
 University of Michigan
 426 Thompson Street
 Ann Arbor, Michigan 48106

Hayden, David
 Board of Education of Charles County
 La Plata, Maryland 20646

Hayott, Martin
 Director
 Teaching Resource Center
 The City University of New York
 144 W. 125th Street
 New York, New York 10027

Herman, Bob
 Assistant Deputy Commissioner
 B.E.H. - U.S. Office of Education
 Regional Office Building 3
 7th & "D" Streets S.W.
 Washington, D.C. 20202

Howe, Norm
 Learning Resources Branch
 B.E.H. - U.S. Office of Education
 Regional Office Building 3
 7th & "D" Streets S.W.
 Washington, D.C. 20202

Iraci, Joseph
 Project Director of New York State ALRC
 New York State Department
 55 Elk Street
 Albany, New York 12224

Jones, J. Dean
 Program Director
 Utah State Training School
 American Fork, Utah 84003

Katz, Barry
 Project Officer
 Learning Resources Branch
 B.E.H. - U.S. Office of Education
 Regional Office Building 3
 7th & "D" Streets S.W.
 Washington, D.C. 20202

Kawahara, Hatsuko F.
 Director of Special Education
 1270 Queen Emma Street
 Honolulu, Hawaii 96813

Kladder, Fred
 Consultant - Division Special Education
 and Pupil Personnel
 Department of Public Instruction
 120 West Market Street
 Tenth Floor
 Indianapolis, Indiana 46204

Kramer, Kay F.
 Director, Midwest Area Learning
 Resource Center
 1336 - 26th Street
 Drake University
 Des Moines, Iowa 50311
 Conference Coordinator and Co-Editor

Kramer, Terry
 Coordinator, Regional Resource Center
 State Department of Education
 942 Lancaster Drive N.E.
 Salem, Oregon 97310

Losh, Mary Ann
 Consultant, Federal Projects
 and Learning Disabilities
 Special Education Section
 State Department of Education
 233 South 10th Street
 Lincoln, Nebraska 68508

McCrea, Dennis
 Program Director - Special Education
 % Department of Education
 Pago Pago, American Samoa 96799

McGonagle, Anne L.
 Project Director Child Placement
 an Registry
 Division of Special Education
 182 Fremont Street
 Boston, Massachusetts 02127

Maldari, Nick
 Executive Director - Northeast Regional
 Resource Center
 New Jersey State Department of Education
 225 West State Street
 Trenton, New Jersey 08625

Mann, Lester
 Director of Special Education
 Montgomery County, Pennsylvania
 705 Oak Terrace Drive
 Ambler, Pennsylvania 19002

Manus, Louis
 Consultant for Speech and Hearing
 804 N. Euclid
 Pierre, South Dakota 57501

Martinson, Marty
 Director, CORRC
 Bradley Hall
 University of Kentucky
 Lexington, Kentucky 40506

Meeker, Mary
 Director of Training School Psychology
 Loyala Marymount University
 80th South University Blvd.
 Los Angeles, California 90045

Miller, Linda
 Project Service Coordinator
 Midwest Regional Resource Center
 Drake University
 1332 - 26th Street
 Des Moines, Iowa 50311

Morrow, Henry
 Support Coordinator
 Texas Regional Resource Center
 Southwest Educational Development Lab.
 211 East 7th
 Austin, Texas 78701

Morse, William
 Professor of Educational Psychology
 Educational Psychology Department
 University of Michigan
 Ann Arbor, Michigan 48106

Noffsinger, Thomas
 Assistant Director NCEMMH
 220 W. 12th Avenue
 Columbus, Ohio 43210

Ringleheim, Daniel
 Deputy Assistant Commissioner
 225 West State Street
 New Jersey Department of Education
 Trenton, New Jersey 08625

Rhodes, William
 Professor ISMRD
 130 South First
 Ann Arbor, Michigan 48108

Roane, Marie
 Project Officer
 Learning Resource Branch
 B.E.H. - U.S. Office of Education
 Regional Office Building 3
 7th & "D" Streets S.W.
 Washington, D.C. 20202

Rosonke, Dick
 Coordinator, Media Program Development
 Midwest Area Learning Resource Center
 Drake University
 1336 - 26th Street
 Des Moines, Iowa 50311
 RRC Conference Co-Editor

Sabatino, David A.
 Professor and Chairman
 Department of Special Education
 Northern Illinois University
 DeKalb, Illinois 60115

Schmitt, Ida, Asst. Director
 Special Education
 State Department of Public Instruction
 Bismarck, North Dakota 58501

Stetler, Landis M., Chief
Bureau for Exceptional Children
Florida Department of Education
Tallahassee, Florida 32304

Streissguth, William
Director, Pennsylvania Regional
Resource Center
NLRCLP
443 South Gulph Road
King of Prussia, Pennsylvania 19406

Sydoriak, Diane
State Media Consultant
Special Education Section
Arch Ford Education Building
Little Rock, Arkansas 72201

Thomas, Elsa H.
Assistant Special Education Coordinator
Trust Territory
Department of Education
Saipan, Mariana Islands 96950

Tucker, James
Director of Regional Resource Center
Texas Education Agency
201 East 11th Street
Austin, Texas 78701

Walraven, Maurice P.
Director of Special Education
State Department of Education
State Capitol Building
Oklahoma City, Oklahoma 73105

Weithers, Betty
Coordinator, Instructional Materials Centers
Special Education Division
State Department of Education
120 East Tenth Street
Topeka, Kansas 66612

Wells, Fred R.
Alabama Learning Resources System
435 Bell Street
Montgomery, Alabama 36104

Wenzel, William W.
Coordinator, Great Lakes Area
Regional Resource Center
126 Langdon Street
Madison, Wisconsin 53702

Weston, Bruce
Director, California Regional
Resource Center
1031 South Broadway
Suite 623
Los Angeles, California 90015

Wilson, Betty June
Supervisor
Field Consultant
Instruction Division
Townsend Building
Dover, Delaware 19901

Yule, Dick
Associate Director
Teaching Resource Center
The City University of New York
144 W. 125th Street
New York, New York 10027

CONFERENCE PROGRAM

CONFERENCE SPEAKERS:

DR. EDWIN W. MARTIN
Acting Deputy Commissioner
Bureau of Education for the Handicapped

DR. RONALD HAVELOCK
Professor and Program Director
Institute for Social Research
University of Michigan

MR. J. DEAN JONES
Program Director
Utah State Training School

DR. LESTER MANN
Director of Special Education of Montgomery County
Pennsylvania

DR. MARY MEEKER
Director of Training School Psychology
Loyola Marymount University
Los Angeles, California

DR. WILLIAM MORSE
Professor of Education and Psychology
University of Michigan

DR. WILLIAM RHODES
Professor of Psychology
Institute Study of Mental Retardation and
Related Disabilities
University of Michigan

DR. DAVID A. SABATINO
Professor and Chairman
Department of Special Education
Northern Illinois University

DR. JAMES TUCKER
Director of the Regional Resource Center
Texas State Department of Public Instruction

CONFERENCE PROGRAM (CONT.)

CONFERENCE SCHEDULE

FRIDAY SEPTEMBER 20	6:30 pm	Keynote Address, DR. EDWIN MARTIN
SATURDAY SEPTEMBER 21	9:00 am	Systems Overview, DR. RONALD HAVELOCK
	11:00 am	Discussion Groups
	1:30 pm	Diagnosis, Cognitive Disorders, DR. MARY MEEKER
	3:30 pm	Discussion Groups
SUNDAY SEPTEMBER 22	9:00 am	Cognitive Treatment, DR. LESTER MANN
	11:00 am	Discussion Groups
	1:30 pm	Diagnosis, Emotional Disorders DR. WILLIAM MORSE
	3:30 pm	Discussion Groups
MONDAY SEPTEMBER 23	9:00 am	Educational Programming, Emotional Disorders, DR. JAMES TUCKER
	11:00 am	Discussion Groups
	1:30 pm	Diagnosis, Sensory Motor, DR. DAVID SABATINO
	3:30 pm	Discussion Groups
TUESDAY SEPTEMBER 24	9:00 am	Treatment, Sensory Motor, DR. DEAN JONES
	11:00 am	Discussion Groups
	1:30 pm	Ecological Overview, Diagnosis and Treatment, DR. WILLIAM RHODES
	3:30 pm	Discussion Groups
	4:30 pm	Conference Closure

CONFERENCE PROGRAM (CONT.)

CONFERENCE FACILITATORS

MR. KAY F. KRAMER
Conference Coordinator and Editor
1336 26th St.
Drake University
Des Moines, Iowa 50311

DR. RICHARD ROSONKE
Conference Co-Editor
1336 26th St.
Drake University
Des Moines, Iowa 50311

MS. SHARON CARMODY
Conference Secretary

328